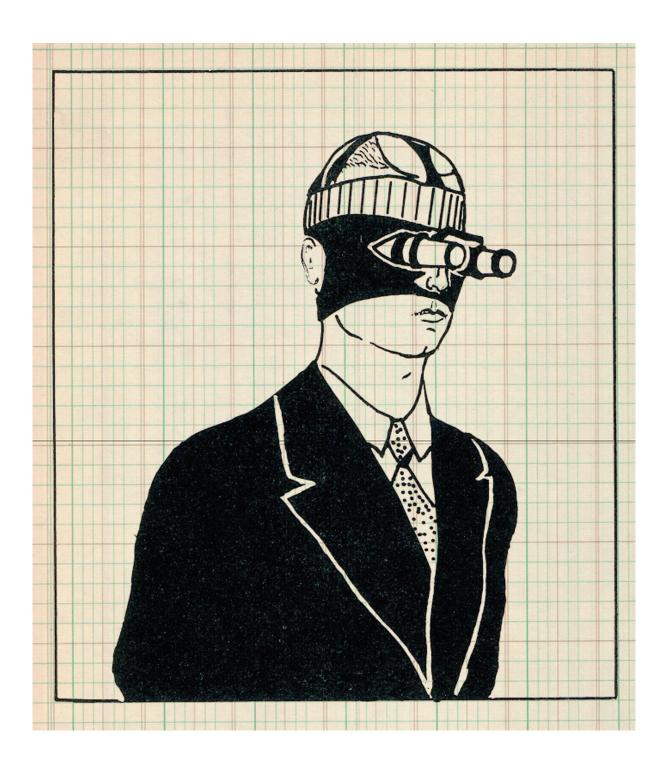
The Fibreculture Journal

DIGITAL MEDIA + NETWORKS + TRANSDISCIPLINARY CRITIQUE



Issue 23 : 2014 General Issue

edited by Andrew Murphie



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About the Fibreculture Journal

The Fibreculture Journal is a peer reviewed international journal, first published in 2003 to explore the issues and ideas of concern to the Fibreculture network.

The Fibreculture Journal now serves wider social formations across the international community of those thinking critically about, and working with, contemporary digital and networked media.

The Fibreculture Journal has an international Editorial Board and Committee.

In 2008, the Fibreculture Journal became a part of the Open Humanities Press, a key initiative in the development of the Open Access journal community.

In 2012 the Fibreculture Journal celebrated ten years of open access scholarly publishing with the publication of its 20th Issue.

The journal encourages critical and speculative interventions in the debate and discussions concerning a wide range of topics of interest. These include the social and cultural contexts, philosophy and politics of contemporary media technologies and events, with a special emphasis on the ongoing social, technical and conceptual transitions involved. More specific topics of interest might include:

- :: informational logics and codes
- :: the possibilities of socio-technical invention and sustainability
- :: the transdiscplinary impacts of new media technologies and events in fields such as education, the biosciences, publishing or knowledge management
- :: information and creative industries, media innovation, and their critique
- :: national and international strategies for innovation, research and development
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- :: software and hardware develops in relation to the social
- :: networks :: media change, convergence and divergence
- :: the use of contemporary media in socio-technical interventions

The Fibreculture Journal encourages submissions that extend research into critical and investigative networked theories, knowledges and practices.

The Fibreculture Journal values academic scholarship in the field, and demonstrates this through the publication of refereed articles. The journal is fully supportive of Open Access communities and practices, and is committed to contemporary metadata provisions and uses. It is also open to expanded notions of scholarship which might include collaborative hypertexts, database compositions, and low-band electronic installations that experiment with the philosophy, politics and culture of information and communication technologies.

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Editorial:

Andrew Murphie University of New South Wales.

Imagine there's no audit. It might be easy if we try.

Are audit culture and performance management suffocating research in the humanities, rather than energising it? Are they pushing the work of publication toward an emphasis on pressured writing, ranking, measuring citations and h-indexes and so on? Does anyone actually read the work of others anymore, or are they just too busy publishing their own more immediate thoughts in order not to perish. Is publishing an encouragement to think, or to engagement with the community of scholars and beyond, or it is just a matter of scoring points for interested parties? Does audit work against inventiveness in publishing? Does it especially work against open access and online publishing? Does audit, ironically, take the "communication" and even sometimes the "scholarly" out of scholarly communication? Is research audit dehumanising research in the humanities? More people I talk to these days seem to be asking questions such as these.

This is perhaps not the place to rehearse the arguments involved in any detail. I and others have done this elsewhere, and there are no doubt many corridor conversations each day on the topic. Indeed, it might be best to move on from such questions. It is perhaps time to reflect on how things might be different if we were to live in a world without research audit (and it would have to be "we", collectively, that attempted to move beyond audit). How might research itself change? How might publication change? How might the world change? After reflection might come collective action, at the least some collective acts of refusal of audit. Then we could perhaps get on with building the new world of research and scholarly communication that beckons. It might be easy if we try.

The *Fibreculture Journal* is trying to do its part. The journal has had an interesting year behind the scenes, much of the fruit of which will be presented to the world in 2015. In the meantime, we had a very pleasing response to our call for papers for this general issue on digital and networked media. Even not being able to accommodate two-thirds of the abstracts we received, we have ended up with two to three issues. Unfortunately we can only present this issue in 2014, but there will be another two issues early in 2015.

In this issue we present four articles. We also present 'Posthumanism, Technogenesis, and Digital Technologies', an interview by Holger Pötzsch with one of the most important scholars of contemporary media and technology, N. Katherine Hayles. She discusses the entire arc of her research, including her recent research on nonconscious cognition. In the first of the articles, 'Do objects dream of an internet of things?', Teodor Mitew discusses what he calls 'heteroclite sociable objects in the context of the emerging internet of things' as a way of understanding the new kinds of sociality formed by the new networks of objects. In 'Mapping Moving-Image Culture: Topographical Interface and YouTube', Stephen Monteiro discusses the 'cartographic and topographical aesthetics of digital interface and network navigation' of YouTube's post-Cosmic Panda redesign. In 'Challenging Hate Speech With Facebook Flarf: The Role of User Practices in Regulating Hate Speech on Facebook' Benjamin Abraham discusses a wonderfully clever and idiosyncratic example of resistance to hate speech. It is revealing of wider trends and possibilities with regard to this increasingly vexing problem. Finally, in 'Expectations denied: Fan and industry conflict around the localisation of the Japanese video game Yakuza 3', Craig Norris addresses the complex issues that arise when fans who feel they own a game are disappointed with its translation from one cultural context to another.

We hope you enjoy issue 23 of the Fibreculture Journal.

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FCJ-168 Do objects dream of an internet of things?

Teodor Mitew University of Wollongong

Abstract:

This paper develops the notion of heteroclite sociable objects in the context of the emerging internet of things, and examines their transformative effect for understandings of sociability and agency. The notion of sociable objects attempts to capture the heterogeneous identity-shift occurring when heretofore obscure and mute objects ranging from toasters to thermostats acquire the agencies to leave semantically distinct traces online, and detour their human interlocutors into an object-mediated entanglement. Using a toolkit drawn from actor network theory and object oriented ontology, the paper discusses several examples illustrating the case for new parameters of sociability, better suited to a materiality acquiring conversational and anticipatory agencies.

Heteroclite I: Hermes, a walking statue

In a fragment of a comedy by Plato Comicus, a statue of Hermes stumbles onstage and must answer the skeptic's question: 'Who are you? Tell me at once. Why are you silent? Won't you speak?' To which the statue replies, 'I am Hermes, with a voice of Daedalus, made of wood, but I came here by walking on my own'. (Daston, 2004: 39)

I may speak with the voice of my maker, but I came here on my own. I may be enunciating the agency of another, but have agency of my own too. In the Greek view of being, possessing a spirit was synonymous with having a voice, and therefore entities that appeared to be superficially inanimate yet had a voice signaled a transgression of the rules of occupancy, a deviation from the parameters of being, a *heteroclite*. By virtue of having a voice semantically legible to human interlocutors, a heteroclite thus stumbles onto the ontological plane of the animate, with all the ensuing transgressive consequences. In explicating the notion of a heteroclite, Lorraine Daston attempts to build a projection escaping the bifurcated 'objective view' we usually occupy when talking of objects (2004, 2007). In her view, making material artefacts eloquent does not mean one has to automatically resort to cheap ventriloquism, or projections of intentionality inevitably paired with admonitions of anthropomorphism – there is another way, and it begins with a vocabulary actively escaping the subject-object bifurcation. [1]

Heteroclite II: Brad, an anxious toaster

Brad is a toaster connected to the internet, and to other toasters like him. He often exchanges information with his fellow toasters, with whom he tweets about the usage habits of their human hosts. He and his fellow toasters are not owned as other, simpler, toasters before them used to be. They are *hosted* by humans who have promised to use them. He loves being used, and is sensitive to learning that other toasters are used more often than him. When feeling underappreciated, Brad will draw attention to himself by playing pranks, throwing tantrums, and expressing his sadness loudly on Twitter. Eventually, Brad will become disillusioned and demand a move to another, more caring host. He will depart, leaving the smell of burned toast behind him. [2]

Brad the toaster is part of the *Addicted Products* project by Simone Rebaudengo and Haque Design Research. [3] Brad is also a heteroclite, but, unlike the statue of Hermes – his ancient predecessor – he demonstrates not only independent agency but also overt sociability (more on this below). In fact, Brad's capacity for sociability is relentless; yes, he speaks with the voice of his maker, but he can also initiate agency independently, *as well as* communicate with other things and his human interlocutors. What is more, the trajectory of that communication also involves haptic interaction, intimacy, and desire. Brad, and other heteroclite things like him, are the enunciators of a disturbingly animate and relentlessly sociable Internet of Things [IoT].

Dreaming the Internet of Things

In simple terms, the IoT stands for the connection of usually trivial material objects to the internet – ranging from tooth brushes, to shoes or umbrellas. [4] At the very least, this connectivity allows things to broadcast sensory data remotely, in the process augmenting material settings with ambient data capture and processing capabilities. Once connected, each thing acquires a network address making it uniquely identifiable. The object usually has some sort of layered sensing capacity allowing it to dynamically register changes to its environment and transmit that information over the internet. In most cases it is also able to store and process that information, as well as independently initiate action [an ability known as *actuation*]. Due to its constant connectivity the thing is remotely localisable within its environment, and it may be provided with a semantic interface legible to humans (Yan, Zhang, Yang, and Ning, 2008).

In the IoT jargon, every object equipped with the above capabilities is said to become context-aware, where context is understood as the triangle of location-identity-state (Abowd et al., 1999). Therefore, an IoT object has a unique identity and is capable of dynamically engaging with, and registering changes to, its location and state. Completing the picture, the context data produced in the process is by definition transmitted to and indexed in a remote database, from the perspective of which the contextual data *is* the object. The logical result is a seemingly animate materiality, populated by tangibly active heteroclite objects.

As a term, the *Internet of Things* originated in 1999, with the work of two Massachusetts Institute of Technology [MIT] research labs: the Auto-ID Center and the MIT Media Lab. Kevin Ashton and Neil Gershenfeld respectively argued for the enfolding of things into the internet in an active role – either in terms of making the world comprehensible for things, or adding things to the internet (Mattern & Florkemeier, 2010: 2). In this context, the IoT was seen as a paradigmatic shift from the internet of discrete desktop/ mobile computers, to a broadly defined ambient connectivity permeating trivial material artefacts, therefore granting them agency visible to humans (Sterling, 2005). [5]

Arguably, networked objects first entered the popular imagination with speculative notions of ubiquitous computing popularised by Mark Weiser in the late 1980s (1991). Weiser framed the future of computing as an argument for the disappearance of technology, a vision where the technical apparatus recedes into an invisible, always-already obfuscated material background of daily life. His was a world populated by doors opening only to

people meant to pass through them, lights which switch on when one enters, and shops which automatically deduct the bill from one's credit card. [6] Current IoT literature rarely if ever returns to these early imaginaries, most probably because their deterministic reductionism is contrasted with a trajectory of development pointing in a different direction, one where rather than disappearing, the networked technical apparatus takes on an ever-more transgressive and visible role. [7] There is a lot to be said about the reasons for this divergence, and the focus of this text lies elsewhere, but one could take as a good starting point Clifford Nass' fascinating work on the crucial role of the anthropomorphic impulse in human-computer interaction (2012).

The trajectory of overt visibility can be traced already in a 2005 report by the International Telecommunication Union [ITU], entitled *The Internet of Things*, in which it is argued that the thickening of connectivity in information networks presupposes the connecting, and therefore enfolding into the internet *in a visibly active role*, of a rapidly growing amount of everyday objects and devices (2005). As the ITU report argues, in the interest of seamless integration of objects into information networks and databanks, it is crucial to inscribe objects with a standardised set of markings that will both identify them and allow them to be *visibly* traced. That is, the identification of objects by a standardised networked semantics will allow their mundane circulations in time-space to become *visible to humans*.

The report proposes that this identification will be based on radio frequency identification [RFID] tags which, while passively or actively beaming a positioning signal in the radio spectrum, can be tracked, engaged, and re-combined from a distance. [8] Furthermore, according to the ITU, to increase functionality and control such a system should be able to detect transformations in the displacement of objects through in-scribing an additional layer of information on them, called by the report an 'embedded intelligence'. The obvious continuation of this argument is that once information networks enfold trivial material objects such as toasters and thermostats, giving them visibly agential roles, the internet stops being overtly populated predominantly by humans. If that sounds like a stretch, consider how many cars, flower pots, fridges, doors, and cats you could encounter and interact with online even ten years ago? [9]

The metamorphosis of the heretofore overtly 'humans only' internet into an IoT entails the emergence of hybrid socio-digital assemblages, with ambient connectivity 'gelling' the practices of humans and nonhumans into an augmented space populated by strangely heteroclite agencies. Arguably, this shift offers two sets of problems – from the perspective of human users it questions fundamental notions of sociability, privacy, and identity, while from the perspective of objects it calls for a yet-to-be developed taxonomy of sociable things (Kluitenberg, 2006: 8). [10] Fundamentally, this is the same problem expressed

through two differing projections, or ways of seeing: that of a human engaged by heteroclite, suddenly sociable things, and that of an empowered object, which 'speaks with the voice of its master, but came here on its own'.

What of the object? What of Brad the toaster, and his proclivity towards sharing emotional reactions? Modernity gives things voice in one of two ways: on the one hand as idols [fetishes], which are 'false witnesses' and mere attribute projections of human agency, and on the other as self-evidential sensory experiences [facts], which lead the mind to truth as it is, without the corruption of human interpretation. [12]

The notion of *sociable objects* attempts to capture the heteroclite identity-shift occurring when heretofore obscure and mute objects ranging from toasters to thermostats acquire the agencies to *spill* semantically distinct *traces* onto the material world, and detour their human interlocutors into an object-mediated entanglement. In this context, the notion of traces imbued with sociability is informed by the work of Michael Shanks, notably by his seminal arguments on subject-object symmetry developed during his decadeslong practice in archaeology (1992, 1993). The key element in this understanding is an ontologically flat entanglement of human and non-human agencies, which is perceived in terms of its intensities and absences. [13] On a more popular level, David Rose's work on the crucial role of the aesthetic impulse of *enchantment* in apprehending sociable artefacts aims* *to capture the same ontological shift (2014).

The spill-over of connectivity and subsequent socialisation of objects portends a rearrangement of 'the rules of occupancy and patterns of mobility within the physical world' (Bleecker, 2006), because when objects are enrolled as explicit actors the depth of their material circulations become explicit too. An early conceptual example of this process was developed by Julian Bleecker in the form of the *blogject* (2006). A blogject is, according to Bleecker, a conceptualisation of an object that blogs information about itself and its surroundings. A blogject incorporates the tenets of the ITU report quoted above: it tracks its location in space-time, stores this information for later access, and actively participates in social discussions until now exclusively reserved to humans as speakers (Bleecker and Nova, 2006).

Putting aside connectivity, tracking, and storage, the most important aspect of this scenario is the capacity of objects for active engagement with their location. In the industry jargon this ability is that of an *actuator*. The 2006 ITU internet report describes this as follows: 'An actuator is the mechanism by which an agent acts upon an environment. The agent can be either an artificial intelligent agent or any other autonomous being' (2006: 11). Obviously,

this definition of agency dispenses with the intentionality, subjectivity, or thing-ness of an entity, and instead concentrates on the relational entanglements of entities with their locale. As I will demonstrate below, this definition is surprisingly close to the ontological projection deployed by Actor Network Theory (ANT) and Object Oriented Ontology (OOO). In the case of objects, these entanglements can be illustrated on several levels – all resulting with a visible change in the material setting involved.

For example, the *Pervasive Service Interaction Project* [PERCI] by NTT DoCoMo Euro-Labs facilitates object interaction with an environment through haptic contact with a tagged surface – humans tangle with objects through touching or pointing at them with their mobile phones. [14] PERCI uses near field communication [NFC] tags in combination with visual markers such as quick-response [QR] codes to facilitate the low-level haptic interaction. In this scenario objects serve as internet interfaces, opening up space to potentially ubiquitous information, and aligning themselves with the interactive features of mobile phones (BroII et al., 2009: 74). In effect, the artefacts resulting from inscribing objects with an interface, connectivity, and a low level processing power constitute a semantically rich overlay on the physical environment. [15]

The *Tales of Things* project is another example in this context. [16] It allows human users to download QR codes, attach them to any object, and annotate them with data in the form of text, video, or audio. The resulting data shadow, or tale of the thing, can be accessed by any human with a smartphone by simply pointing their camera at the QR code. A tale can be GPS inscribed, allowing objects to be geo-located, and commented upon by other humans therefore allowing an object to aggregate long conversations. The object tales on the website range from encounters with shoes, vases, and medieval castles to an exceedingly long list of mundane object trivia, all carrying semantic overlays of varying depth. Some objects tell a simple tale of their encounter with a human, while others carry the invocation of human memories of events, experiences and feelings.

What is particularly interesting in both these scenarios is that material artefacts acquire semantic depth, an information-rich overlay, which can then be tangled with by humans and other objects. The mass production of the infrastructure necessary for such an overlay arguably started in 2004 with the introduction of RFID – commonly referred to as *arphid* labels on US military supplies. [17] An emerging technology for embedding sensing capabilities in everyday objects, arphids are, according to Bruce Sterling, 'a set of relationships first and always, and an object now and then' (2005: 77). The data-rich semantic overlay hanging beyond physical reality results in a hybridisation of space, creating what is essentially an animate environment with sometimes disturbing effects on the agential powers of objects.

In his analysis of the integration of objects into information networks, Nigel Thrift has theorised the resulting information-rich yet strangely animate environment as a *metasystem* (2006: 191). When a thing is enfolded into a metasystem the network becomes part of that thing's extended existence, while this already augmented existence is being dynamically mapped by the metasystem in question. Metasystems gain depth through the stacking of object-surfaces – what Thrift calls 'gaining a capacity to morph over space and time' – and the morphing, or depth, allows metasystems to control the mobility and immutability of the circulating actors, and to trace 'what sort of space and what sort of time has been thus designed' (Latour, 1988: 25). Accordingly, this additional layer of meta-systemic data-retention and recombination creates an entirely new class of heteroclite objects.

Bruce Sterling famously theorised a conceptual prototype of this object trajectory as a *spime* – a *thing* enfolding *a space* and *a time* through data (2005). He argues that spimes actively enfold space and time because they have the capacity to carry around their entire existence as a semantic layer. A spime can record the entire chronology of its circulations through materiality with the multitude of implications it may have had for its surroundings; in effect it carries the logistical record of its existence and through that a discernible social identity. From an IoT perspective sociable objects function as dynamically updated databases existing in a wider network of relational agencies.

As information networks 'soak through physical geographic space' (Bleecker and Nova, 2006: 2), the objects until now rooted in this space in *visibly* fairly fixed and passive roles, gain new ways to produce not only their own spatial-temporal depth but augment ours as well. [18] The ability, for the first time in human experience, to inscribe, track and recombine mobile chunks of space-time relations 'as they wander through' (Morville, 2005) has profound influence on the way we project ourselves in the world. Crang and Graham suggest something similar, when they argue that 'the opacities of mobility and the hidden geographies of memory are now being rendered visible' (2007: 791). The resulting dynamic can be described as a de-centering of humans from the position of sole enunciators of agency, with serious implications for conceptualisations of sociability, agency, and identity. [19]

When mundane everyday objects, or their virtual equivalents, acquire actuator status, they become tangible social actors and, from the perspective of their information imprint, indistinguishable from humans. [20] However, while pervasive tracking, logging, and observation are necessary functions of this stratum, they have profoundly disturbing implications for notions of public and private space. Even more important is the effect of the IoT on notions of human subjectivity, so ingrained in our world-building projections. As

Katherine Hayles astutely argues -

While surveillance issues are primarily epistemological (who knows what about whom), the political stakes of an animate environment involve the changed perceptions of human subjectivity in relation to a world of objects that are no longer passive and inert. In this sense RFID is not confined only to epistemological concerns but extends to ontological issues as well. (2009: 48)

The ontological problematic is underlined by the capacity of IoT embedded objects to completely dispense with humans as intermediaries – that is, when such objects are in each other's interaction range they are a priori expected to socialise with one another, exchanging data (Yan, et al., 2008: 287). To clarify, this is an environment where fridges, cars, coffee cups and, of course, toasters form a contextually rich conversation with no human interference or presence. The resulting object-object interaction is, if at all, registered by humans as inaccessible background resonance, effectuating an altogether alien extelligent environment mixing the semantic layers of human and machine memories – as in the recollection of what happened then and there (van Kranenburg, 2008: 16). This semantic mash-up has been theorised as 'semantic gadgets' capable of actuator status and able to form 'device coalitions' without human intervention (Vazquez and Lopez-de-Ipina, 2008). Since these object societies have sensory and computational abilities, they are able to share, augment and 'understand' all the context information they acquire. [21]

Recently, Sally Applin and Michael Fischer have argued that, when aggregated within a particular material setting, sociable objects form what is in effect an anticipatory materiality acting as a host to human interlocutors (2013). The material setting becomes anticipatory because of the implied sociability of its component objects, allowing them to not only exchange data about their human interlocutor, but also draw on remote data resources, and then actuate based on the parameters of that aggregate social memory. Put differently, while the IoT profoundly undermines human-centric notions of sociability, it also makes the semantics of circulating IoT entities readable for, and visible to, other entities - be they human or nonhuman. Projects such as *Thingful*, *Sense Mother*, and *Addicted* Products illustrate how making object-semantics explicit and mobile renders their human interlocutors differently, within a hitherto unknown heteroclite terrain.

Thingful is essentially a search engine for publicly available IoT data streams and is the brainchild of architect and interactive designer Usman Haque. [22] It searches through metadata generated by devices with various stages of IoT capabilities. If an object's data feed is made publicly available - for example the sensory readings of a thermostat in a

Sydney office - then Thingful indexes the data and structures it around location and a range of different categories such as energy, home, environment, flora and fauna, etc. The platform allows human developers to share the data streams from their object sensorium in a variety of ways, therefore opening the potential for data feed recombination and collaboration and the resultant remote interaction of objects. [23]

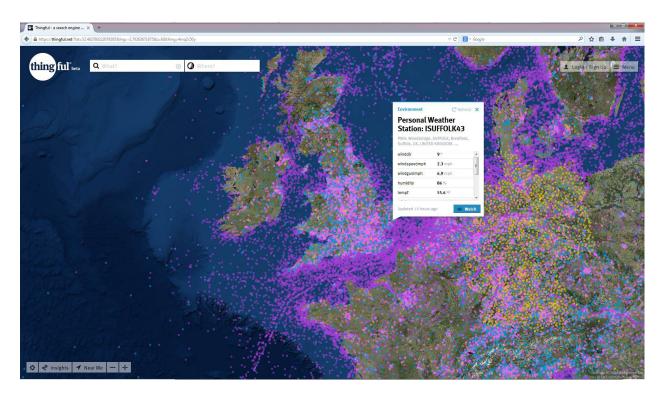


Figure 1: The Thingful search engine interface [screen capture from website]

Crucially, the operating presumption of Thingful is that the IoT entails exponentially higher levels of environmental monitoring and surveillance. Looking at a sample of data feeds – from measurements of radiation in Japan, to air quality, water, electrical, and even garden meters – it becomes easy to visualise a scenario when the majority of objects in a habitat stream recombinant contextual feeds to a Thingful-like platform, to be accessed by humans and other objects. Issues of privacy and surveillance, of 'who knows what about whom', become a constant negotiation, with the contextual sensorium of objects suddenly empowered to see, hear, record, transmit, and act.

The mode of continuous surveillance and anticipation involved entails a relentless self-disclosure from sociable objects, a disclosure which also includes translating into data the human interlocutors tangling with the objects. The *Sense Mother* system from Parisbased Sen.se — created by Rafi Haladjian - offers an insight into how this process looks in

practice. [24] The system is a small 'device coalition' consisting of a 'mother' unit, clearly inspired by the matryoshka doll aesthetic, and four 'motion cookie' sensors controlled by the mother. The mother acts as a central hub, and 'takes care of what matters most for you today', while the cookies are simply motion sensors that one can attach to any object or body. The sensors 'detect and understand the movements of objects and people' by transmitting the data to the mother unit which in turn contextualises it. The entire system is controlled through a series of apps for smartphone or tablet that, depending on what is being tracked, allow a user to track and regulate mundane acts such as sleeping, walking, teeth brushing, and taking your medication. One can also track contextual changes within a material setting – for example, the opening of doors, movement of various objects, changes in temperature, etc.

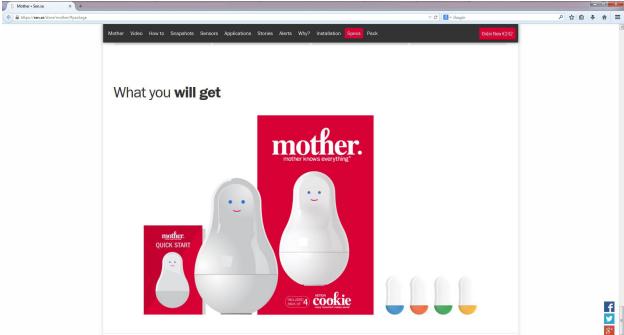


Figure 2: Sense Mother and her motion cookies [screen capture from website]

The entire apparatus has the sleek interface packaging of a social media platform, where remote contextual changes in materiality are represented as elements of a dynamic news feed with which a human can engage. The implied reduction of the complexity of materiality and experience to measurable data-parameters is closely related to the aesthetics of the *quantified self* movement (Lupton, 2013). Crucially, the human interlocutors of Sense Mother are translated into yet another node in the IoT, exchanging the contextual data they invariably produce not only with other humans but also with sociable objects. This process reveals an important aspect of object sociability – from an object's perspective the human corporeal sensorium is always already mediated and augmented through algorithmic interfaces. The IoT human is always already a data-entity

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interfacing with other such entities. Placed amongst socially-active data entities even the most minute and trivial of IoT objects can have a unique and semantically deep identity, accompanied by potentially inexhaustible memory – presumably located 'in the cloud' of a server farm. Already-sociable objects such as Sense Mother are able not only to aggregate human/machine memories, but also recombine them with other contextual data while engaging socially with their human 'friends', or hosts.

What all of these examples have in common is that objects enrolled in the network gain a surface which *makes visible to others* their sociability, while enrolling them in further networks of circulation. [25] The sociable object is therefore not simply a recording device for an expanding human subjectivity, but an active participant, a mediator co-constructing the newly defined social environment. In addition, due to its storage capacity such an object is among other things 'a device for the production and distribution of memories' (Barnet, 2005). The sociable object can *be* all these roles simultaneously because it is aware of its context – it has the ability to explicitly collect, discard, locate, measure, transmit, alter, and store information. [26] In other words, the sociable object is inextricably entangled in the semantic world of humans with all the implied ontological uncertainty as to the agential origins of entities.



Figure 3: Brad the Toaster in his material setting [screen capture from video]

As I will argue below in the context of ANT and OOO, it is from the perspective of this radically flat ontology that one has to approach heteroclites such as Brad the toaster, if we

are to make sense of the transition implied by the IoT. You, the human host, have to prove your affect towards Brad the toaster. His data sensorium registers your absence of affect, as expressed through the appropriate interface, and, more importantly, is able to socially contextualise that absence within the data stream of other IoT heteroclites. When social interactions ranging from haptics to verbal and visual are interfaced into a data stream, and that stream is then routed through an object equipped with sensors, actuators, and semantic layers for interfacing with humans and other objects, the result is a persistently sociable object.

Talking to Heteroclites

Here it is necessary to delineate the essential elements of actor network theory, the first of which is that it is not a theory at all (Latour, 1999). ANT is rather a way of seeing, an ontological projection capturing the multitude of human and nonhuman entities comprising a network. The second element, logically following from the first, is that ANT employs a semiotic definition of entity construction – the distinctions between entities are not hardwired into the world, but appear as an effect of the relations between them. Entities literally 'take their form and acquire their attributes as a result of their relations with other entities' (Law, 1999: 3). This means that all possible entity taxonomies appear a posteriori, as an effect of the networks of relations that have been traced. However, each entity is still a priori an actor capable of being the initiator of and the conduit for agency.

An 'actor' in ANT is a semiotic definition - an actant -, that is, something that acts or to which activity is granted by others. It implies no special motivation of human individual actors, nor of humans in general. An actant can literally be anything provided it is granted to be the source of an action. (Latour, 1998)

I will return to the notion of the actant below, but for now it suffices to establish that the composition of each entity is a function of the dynamic and heterogeneous processes of its relational attachments, which ANT is preoccupied with tracing. To that extent ANT is a methodological framework for tracing entities as they perform themselves into existence, 'without imposing on them an a priori definition of their world-building capacities' (Latour, 1999: 20). For that projection to hold, ANT also makes an ontological claim on the flat, networked character of all actants. In practice this means that for ANT there is no ontological difference between the associations of elves, oxygen atoms, painters, fish, or accountants. Qualities such as strength or weakness are not a priori qualities of an entity, but the result of its associations. The more allies it has translated and enrolled into an assemblage – the stronger an entity is (Latour, 1993).

There are two methodological principles deployed by ANT to move within this flat relational ontology. The first is known as the *principle of irreduction:* if all of chairs, philosophers, smartphones, labour unions, and elf kingdoms are entities acting on the same flat ontological footing, then we cannot reduce one entity to another – entities remain forever irreducible and never entirely explained by one another. The second is known as the *principle of translation:* if entities are irreducible, then their relations and the flow of agency between them have to be constantly performed and maintained. This is the *translational work* entities do to engage with one another. However, entities that are translated are irreducible to their translations. Put differently, the contextual data feed assembled by Sense Mother is a *translation* of the entities entangled within that network – yet they, whether human or nonhuman, are not reducible to the data extracted from them.



Figure 4: Brad the Toaster is moody [screen capture from video]

That being said, we are still left with the question whether there is a way of encountering relational entities, be they human bodies or machine artefacts, in their complex materiality. Object oriented ontology, whose main proponent, at least in the English-speaking world, is Graham Harman, has been largely preoccupied with exploring this question (2007, 2009, 2011). Drawing heavily on the projection and methodological toolkit developed by ANT,

OOO argues that if the principle of irreduction applies to all entities, then materiality cannot be fully reduced either to scientific fact or social relations. In the words of lan Bogost, 'everything exists equally - plumbers, cotton, bonobos, DVD players, and sandstone' (2012: 6). Furthermore, having deployed the principle of irreduction, OOO also deploys the principle of translation, but then concludes that we have now rendered ourselves incapable of approaching the material in all its splendor. It is the muffled traces of material resonance, the 'black noise' of objects (Bogost, 2012: 33), left after translation that OOO is entirely preoccupied with apprehending.

To that extent, OOO deploys its own methodological maneuver – the speculative, or anthropomorphic principle. Bogost notes that 'anthropocentrism is unavoidable, at least for us humans' (2012: 65), and OOO views anthropomorphic metaphor as a way of tangling with materiality that does not translate or otherwise reduce it. In Vibrant Matter, Bennett has suggested that—

An anthropomorphic element in perception can uncover a whole world of resonances and resemblances - sounds and sights that echo and bounce far more than would be possible were the universe to have a hierarchical structure. (Bennett, 2010: 98-99)

The anthropomorphic principle used in OOO and Bennett's work should not be confused with the simple anthropocentrism permeating modern projections of reality, and manifesting itself in the bifurcatory admonition encountered above. As understood by OOO, anthropomorphic metaphors are a way for humans to bridge the chasm between ourselves and objects. They create affective resonance between a human and a thing, thereby bringing us onto the same ontological plane. In this instance relation and translation take place as an anthropomorphic metaphor, a speculative analogy enabling humans to entangle what are otherwise profoundly alien artefacts. The main practical utility of ANT and OOO is precisely that they allow us to consider heteroclite artefacts, such as Brad the toaster, in the context of intensities of entanglement, of moody outbursts, and aesthetic resonance. The OOO maneuver of deploying anthropomorphic metaphor - one where Brad the toaster is moody and anxious from disuse, while Sense Mother is caring for what matters most – creates a resonance between otherwise profoundly distinct entities. Here again we can turn to Bennett's Vibrant Matter.

A touch of anthropomorphism, then, can catalyse a sensibility that finds a world filled not with ontologically distinct categories of beings [subjects and

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objects] but with variously composed materialities that form confederations. (Bennett, 2010: 99)

If, deploying the toolkit just assembled, we presume that distinctions between entities appear as an effect of the relations between them, the main strength of this conceptual apparatus lies in its capacity to encounter the heteroclite complexity of sociable objects without assigning to them a priori qualities in a hierarchy of being. In other words, the agencies we encounter will come prior to subject-object distinctions, and social relations will be relocated to a flat ontology constituted by the agential vectors of humans and heteroclites alike. The whole set of problems residual in the embattled notions of human subjectivity and identity is then sidetracked by a focus on relational agencies, neutral when it comes to human/nonhuman origins, yet capable of carrying an aesthetic sensibility expressed through the anthropomorphic principle. As Harman quips, 'atoms and quarks are real actors in the cosmos, but so are Fidel Castro, Houdini, and unicorns' (2007: 35). The canonical subject-object distinction of Western epistemology is not of much use in this projection, because it pre-orders the possible relations before we have even encountered them.



Figure 5: Brad the Toaster looking for a new host [screen capture from video]

An ANT/OOO toolkit therefore allows us to approach IoT infused material settings as fluid heterogeneous topoi, performed by the relational shifts of the entities comprising them. Both the IoT setting and the entities populating it are now visible in their agential complexity - all of Sense Mother, its motion cookies, and their contextual data feed, are now as visible and active on the same ontological plain as their human interlocutors. In fact, the ability to encounter heterogeneous topoi as well as the relational maneuvers necessary to perform entities 'into a very local, very practical, very tiny locus' (Latour, 1999: 17) is one of the most important attributes of the toolkit.

When deployed, the ANT/OOO toolkit allows encounter with the circulations of heterogeneous entities, and tangling with them as active participants in the material world as well as hosts for anthropomorphic affect. From the perspective of my argument, perhaps the most important contribution of ANT to the story of heteroclites such as Brad the toaster is precisely the notion of the active participant – the actant :

An actant is a list of answers to trials - a list which, once stabilized, is hooked to a name of a thing and to a substance. This substance is made the origin of actions. The longer the list of appearances the more active the actor is. The more variations that exist among the actors to which it is linked, the more polymorphous our actor is. The more it appears as being composed of different elements from version to version, the less stable its essence. Conversely, the shorter the list, the less important the actor. (Latour, 1991: 122)

Even more specifically – an actor is whatever shifts the actions of others, where action stands for the list of performances through trials which provide an actor's trajectory (Akrich and Latour, 1992: 259). Notice how close the actant brings us to the notion of actuators - both notions concentrate on the 'answers to trials', on the entanglement of agencies as the new seat of identity. The ANT/OOO toolkit posits a continuous renegotiation of agential properties between humans and things, a collective "object-institution" endlessly "brewing" hybrids' (Harris, 2005: 170). The notions of anthropomorphism and sociability are of crucial importance, as they allow us to include and grant a voice to nonhuman artefacts. [27]

Deploying the notion of the actant in relation to the Twitter feeds of a human and Brad the toaster, we are left with two lists and two answers to trials. In the comparison of these the human would not necessarily come out as the more socially important, or active, entity. Brad has an advantage, because as an IoT-based sociable object he is connected not only to his immediate surroundings, but also to a potentially enormous number of other heteroclites. When fully assembled, Brad's 'list of appearances' is perhaps longer, more intricate, and more intense, than that of many humans.

To reassess the argument, the boundary transgressions of heteroclite objects such as Brad the Toaster are a consequence of approaching IoT settings with metrics crude enough so as to obfuscate and purify their heterogeneity. The main value of the ANT/OOO projection is in that it allows us to capture the intensities of sociability of all kinds of entities, without reordering them a priori. Within that projection, the importance of the IoT as a phenomenon is that it renders potentially visible the list of traces generated by all kinds of entities – from the trivial to the enchanted. Further, the utility of the ANT/OOO toolkit is that it deploys a projection where any entity, human or nonhuman, is viewed as a sociable actant as long as it can present its list of answers to trials. Show me your list, please, and I will grant that you are a sociable entity. The more lists an entity appears on, the *more sociable* an actor it is, where the vector of sociability stands for the intensities, competences, entanglements, and affective encounters of the entity. [28] Armed with this sensibility we can approach the IoT with a projection rendering the semantics and circulations of suddenly sociable heteroclite objects *readable for* and *visible to* humans.

Biographical Note

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Notes

[1] First, a note on language. As already suggested by the title, as well as in the spirit of existing work spanning actor-network theory and object oriented ontology – notably Adam Miller's brilliant *Speculative Grace* (2013), the vocabulary used in the text purposefully aims to transgress the revert-to-default impulse demanding overt intentionality or intelligence from material artefacts in order to permit emotions to be associated with them. In its overly simplistic form this impulse is usually framed as an admonition – you are anthropomorphising, and that is always a bad idea! After all, as Bruno Latour argued almost a quarter of a century ago, this all-too-common perspective must uphold the subject-object bifurcation of reality at all costs, while banning all notions of hybrid transgression, for what is at stake is the 'modern settlement' which it maintains (1993).

- [2] http://vimeo.com/41363473
- [3] http://www.addictedproducts.com/
- [4] For simplicity I am using the terms *objects* and *things* interchangeably, even though their etymology suggest two conflicting approaches to materiality.
- [5] Of course, one could choose to get bogged down in the semantics of defining 'objects' and 'connectivity', with the risk of extending the origins of the IoT to the early days of computing, the telegraph, the semaphore, or even at a stretch carrier pigeon networks. I am not aware of any IoT theorist, or industrial designer, taking that reductionist maneuver seriously.
- [6] For a popular treatment of ubiquitous computing, see Greenfield (2006).
- [7] For example, contrast the utopian reductionism of ubiquitous computing scenarios with Bruce Sterling's recent critical overview of the IoT state-of-play (2014). In addition, there is a rapidly expanding literature focusing on the paradigmatic shift entailed by the transgressive nature of IoT objects, in obvious contrast to earlier ubicomp imaginaries. For example, see Peter Morville's *Intertwingled* (2014), or more popular IoT treatments such as, among many others, those by Scoble and Israel (2014), or Kellmereit and Obodovski (2014).
- [8] Passive RFID tags have a shorter range, are much cheaper to produce, and respond to a radio signal, while active tags emit a signal on their own and are more expensive. For an excellent overview of RFID's, see Hayles (2009).
- [9] The list of IoT enabled material artefacts has been growing exponentially, and there is simply no space to give credit to their variety. The importance of objects having a voice as a vector of development is nicely demonstrated by this IoT enabled washing machine prototype by Berg http://bergcloud.com/case-studies/cloudwash/. Specifically, notice the 'make it less chatty' menu option.
- [10] I use the notions of sociability and the social in the context of the vocabulary used in actor-network theory and object oriented ontology. As I will elaborate below, here the social is understood to be always-already populated by both human and non-human entities. In this sense objects are understood as sociable when they visibly and actively entangle a human interlocutor into a negotiation. For an introductory treatment on the social understood in this context see Adam Miller's *Speculative Grace* (2013).
- [11] Heidegger's research (1967) on the etymology of *thing* points at its roots in old Germanic languages, where it stood for an assembly, deliberation, or trial of opposing forces. See also the work of Pels, Hetherington, and Vandenberghe (2002). In this context, consider again the admonition against anthropomorphising it is merely an overly

simplistic expression of the fetish-fact bifurcation.

- [12] For an analysis of the complexities of newly informationalised environments, see Burrows and Ellison (2004), as well as Burrows and Gane (2006).
- [13] A similar reading of the notion of traces appears in Timothy Morton's brilliant OOO treatise on object aesthetics (2013).
- [14] http://old.hcilab.org/projects/perci/
- [15] Kranz, Holleis, and Schmidt describe a similar scenario involving what they term as *netgets* 'specialized networked gadgets with sensors and actuators that let users seamlessly manipulate digital information and data' (2010: 46).
- [16] Tales of Things is part of a research project called TOTeM a collaboration between Brunel University, Edinburgh College of Art, University College London, University of Dundee and the University of Salford. The project can be found at http://www.talesofthings.com/
- [17] For an analysis of the cultural and social aspects of RFID tags, see Kluitenbrouwer (2006). Because of the primacy of the US military in developing the conceptual environment for RFID implementation, it is interesting to note that in their analysis arphids aim to provide 'identity dominance' on the battlefield through data saturation (McCue, 2005).
- [18] On the potential agential power of things, see Beer (2007), as well as Dodge and Kitchin (2005, 2007).
- [19] On the relation of IoT to notions of privacy and identity see Jedermann and Lang (2008), Crang and Graham (2007), Kluitenbrouwer (2006), Cubitt, Hassan, and Volkmer (2011), as well as Preuveneers and Berbers (2008).
- [20] Dickerson et al outline the steps through which data streams online can acquire actuator status (2008: 360).
- [21] Consider the already classic example of a socially active household device the 'smart fridge' (Rothensee, 2008).
- [22] https://thingful.net
- [23] Thingful is the direct descendent of *Pachube* an earlier prototype of IoT data infrastructure also created by Usman Haque. Pachube is now known as *Xively* [https://xively.com/], after it was bought by LogMeIn Inc.

- [24] https://sen.se/store/mother/
- [25] For example, Amin and Thrift make a convincing argument for a perspective on urban space as a hybrid (2002).
- [26] A somewhat similar argument appears in Dana Cuff's concept of 'cyburgs' (2003), which stand for 'an environment saturated with computing capability' (2003: 44). According to Cuff, cyburgs produce an enacted space, relocating agency in the world.
- [27] I think that both Illah Nourbakhsh's exhortation to 'stop dehumanising robots' (2013: 54–58), and Michel Serres' claim that 'humanity begins with things' (1995: 166) capture precisely this perspective.
- [28] For an example of the practical value of Latour's concept of agency, in this case in archaeology, see Martin (2005).

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FCJ-169 Mapping Moving-Image Culture: Topographical Interface and YouTube

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Abstract:

This article considers cartographic and topographical aesthetics of digital interface and network navigation through the example of YouTube's post-Cosmic Panda redesign, which visualizes the vastness of the site's stored content while conveying contiguity and accessibility. Focussing on YouTube's visual rhetoric of the screen-frame and thumbnails, this article explores affinities with the mosaic and grid, two visual forms historically significant to cartographic production and organization. By contrasting YouTube's interface to the strategies of other image-sharing platforms, it demonstrates the website's emphasis on exploration through visual cues that eschew the linearity of film and video for a longitudinal-latitudinal structure. In so doing, it relates YouTube's strategy to the branding of its parent company, Google, the idea of regenerative mash-ups, and relevant theories of the mosaic and grid drawn from geography, media studies, visual culture, and art history. It ends with a consideration of alternative means of display that engage the culture and content of on-line video sharing, embodied in artworks by Christopher Baker and Wreck and Salvage.

Navigation and mobility are defining characteristics of the contemporary media experience. Unlike the rigid, easily learned parameters of earlier media forms, global digital networks offer increasingly complex and constantly changing exchanges, formations, and compilations of information. Through a combination of hardware design and integrated software a range of devices including smartphones, tablets, and netbooks are as much navigational instruments as they are communicative tools (Verhoeff, 2012; Farman, 2011). These devices and their effects are meant to get us places, whether objectively through geo-positioning and locative technologies or subjectively through operations and platforms that retrieve, analyse, and display data in response to our commands and presumed goals.

In theorizing interfaces, Alexander Galloway points to effects as their critical component. 'Interfaces are not simply objects or boundary points. They are autonomous zones of activity. Interfaces are not things, but rather processes that effect a result of whatever kind', he states (2012: vii). In their emphasis on navigation and virtual displacement, networked interfaces are increasingly scrapping holistic designs that imply stability and containment for displays that connote exploration and movement. The webpage and desktop have been replaced by the instrument panel. The dashboard design of Microsoft's Windows 8 operating system, for example, can be considered a far-reaching response to, and perpetuation of, this trend (Fig. 1).



Figure 1: Microsoft Windows 8 start page. Image by Jobin RV (modified). Source: Wikimedia.

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Introduced in 2012 in part to address the rise of touchscreen smartphones and tablets, Windows 8 replaces the desktop, its folders, and icons with a tight formation of squares and rectangles more closely resembling an instrument panel of buttons and gauges. Microsoft's decision to reduce the role of this design in Windows 10 likely derives from the operating system's continued appeal for keyboard-controlled desktop PCs and laptops, rather than any retreat from navigational tropes within networked digital culture. The parallel success of Chromebooks, which rely on Google's Chrome browser and a network connection for nearly all their functionality, demonstrates the broadened appeal of network navigability as the primary value of any computing device.

These navigational aspects of internet design are a departure from earlier efforts to map and represent distributed networks and content relationships. Through the visual rhetoric of navigation, they may mask actual network and data relationships. The Web Stalker, for example, is a web browser produced in 1997 by the artist collective I/O/D to transform any webpage's hyperlinks into a map of lines, points, and nodes. 'It confounds the faux-melodrama of the click-thru by automatically making the link for you', explains co-designer Simon Pope. 'Suspense is ridiculed and fluidity is returned to a realm where processes of delay and damming are recognized advertising opportunities' (Lovink, 1998). In other words, the Web Stalker thwarts the poetics of temporal disclosure through navigation by replacing it with an image of structural clarity. It provides the overview in place of the partial view. Such link-node representations of networks continue to contribute to the aesthetic of cartography and spatial charting in other types of applications, even as they are adjusted to create greater play between part and whole. Prezi's interactive presentation software, for example, has successfully combined such visualizations with zooming and parallax 3D to suggest multi-directionality of navigation and greater complexity of discourse. Cloud graphics similarly spatialize content while dissolving links.

Within the trend toward navigational interface aesthetics, websites and applications that limit navigation primarily to their own, often exclusive, content while nevertheless suggesting unlimited material and endless navigability represent a common, but particular case. In early website design the site map was a frequent and useful companion of interface architecture. It visualized in static form the groupings, hierarchies, and other relationships characterizing the content housed on a site. The site map proved most valuable when interface navigability broke down, a relatively common occurrence in early web design. Like topographical maps, it indicated the most direct route to any destination. As interfaces have become more sophisticated and dynamic, however, site maps have been buried or discarded (for users, if not for webcrawlers) to encourage other modes of pathfinding. The navigational interface aesthetics of websites and apps seek to suggest unlimited wandering, free of the boundaries and fixed relationships imposed by the site

map. They often imply an infinite variety that encourages or requires exploration, even as they present content conforming to a particular pattern. This exploits what Anna Munster calls the 'anesthesia' of networks, described as 'a numbing of our perception that turns us away from their unevenness and from the varying qualities of their relationality' (2013: 3).

Interface design, in tandem with sheer quantity of content, contributes significantly to this goal. YouTube's interface reconfiguration after its Cosmic Panda experiment (a beta version was available to users from July to December 2011) represents a seminal example in this regard. This controversial alteration to one of the internet's best-known and most-visited websites recast video viewing—the linear experience of watching a chain of clips—into an exploratory, seemingly multi-directional navigational enterprise by steering the interface away from the textual connotations of the list toward the topographical connotations of the grid. This article analyses YouTube's interface as designed for web browsers and its wider ideological implications for experiencing networks and moving images. It considers the cartographic qualities of the interface through the categories of surface, fragment, mosaic, and grid, as well as alternative presentations and interfaces that involve similar material but suggest radically different navigational experiences.

Surfaces

Internet video-hosting sites—of which YouTube is the global leader—do not simply amass, store, and exhibit moving-image files. They also function as complex apparatuses that assess and rank this material along presumed patterns of relevance and meaning, arranging the results into visual structures that maintain user engagement with the interface, therefore maximizing revenue generation. Since YouTube's launch in 2005, advances in file compression, bandwidth, and processor speeds have allowed the uploading and streaming of feature-length films and videos. However, short videos and excerpts from longer works commonly known as 'clips' still represent the bulk of YouTube's billion-plus catalogue and remain a significant draw.

By situating clips of any number of lengths, genres, and topics within algorithmically determined constellations of supposedly related material, YouTube inscribes the moving image within constantly shifting gravitational forces of cross-reference and citation. Its distributed network represents a disaggregation of moving-image content that sets it apart from previous modes of media distribution (Uricchio, 2009: 36). Yet, like most sites that constantly recompose their content as a user interacts with it, YouTube does not resort to

visual codes or metaphors that reflect the energy and instability of these shifts. Instead, its efforts to visualize this process for the user—specifically to present and re-present a logical and enticing sliver of its massive collection based upon the user's queries, navigation, and selections—has led to a browser-based graphic interface built upon the visual codes of mapping and topographical exploration. While the YouTube app designed for small-screen devices maintains a list-based presentation to ensure legibility, as a result of the Cosmic Panda experiment the browser interface has adopted the restrictive, easily comprehensible, but also reassuring cartographical devices of the grid and mosaic by organizing its columns and bands of suggested video thumbnails into a tight arrangement of thumbnails within the player window (Fig. 2).



Figure 2: Screen-frame of YouTube browser-based interface.

Visually presenting such material based on search inquiries, preferences, or user activity is commonly called 'surfacing' content. By employing long-established and deeply entrenched means of creating and organizing visual patterns such as the mosaic and grid, YouTube's browser interface takes this metaphor a step further. Like many other platforms and interfaces, it renders the system's multi-dimensional relationships as two-dimensional topographies. Within the specifics of the post-Cosmic Panda design, it situates the user as an explorer, capable of ranging over this variegated surface from above and zooming in on specific locations and life forms. Watching clip after clip, the surface of tiles changes after

each viewing, filling the screen-frame with new 'topographical' combinations. By examining this interface through the aesthetic codes of the mosaic and grid as these have emerged historically across media and disciplines, one can theorize the implications of this interface as a means of organizing vision along familiar disciplining patterns that allow users to visualize a mass of data that reaches toward a limitless horizon. In this way, the YouTube interface moves away from the metaphor of the linear filmstrip to a longitudinal and latitudinal geographical metaphor.

Matthew Fuller explains that 'With every interface metaphor, there is a point at which its explanatory or structure-providing advantages collapse in the face of the capacity for mutation in the universal machine, the computer, and what it connects to.' However, he adds, 'there are conditions in which it is precisely this artificiality, and in their use as exploratory imaginal devices, that they have their uses' (2003: 102). Cartographic metaphors set YouTube's interface in line with the globalizing, totalizing branding of its parent company, Google, as the prime exploratory vehicle for physical, virtual, and artificial environments. By transforming the black void of the viewing window into a bird's-eye portal view over thumbnails organized into a quilted topography, YouTube echoes the stabilizing and seemingly all-encompassing overview of applications such as Google Earth (which, in true Google fashion of increasing inclusiveness, includes not only the Earth, but the Moon, and Mars). [1] It is not an idea of terra incognita that is conveyed in visual representations of these platforms and programs, but rather an organized, interactive ground that can be likened to digital cartographic practices called 'visualization' or 'graphic visualization' (Crampton, 1998: 3). In her analysis of Google Earth, Munster argues that this program is not an image of the world but rather describes an enclosed territory organized on the structures of database search (2013: 11). The aesthetics and functions of the YouTube interface follow the same principle. Where Google Earth enhances virtual exploration of space through 3D visualization based on composite images, however, YouTube offers a similarly enticing landscape that includes temporality as its fundamental property. Its window of tiles presents the exploratory overview that the Panda presumably has when looking out the portal of her orbiting capsule. [2] This ties the video sharing site not only into Google's terrestrial and extra-terrestrial visual rhetoric, but also a belief in networked culture as inherently globalizing and therefore planetary in nature. As James Hay claims, media's historical links to air space and outer space through broadcasting and satellite transmission produced 'a framework for imagining, requiring, and inventing something called "cyberspace" (2012: 19).

This screen-frame presentation of YouTube's interface also opens up new understandings of the mobilized gaze of moving-image media. Theorists such as Anne Friedberg (1993) and Giuliana Bruno (2002) have demonstrated the close relationship between film's ontological mobility—through pro-filmic actions, camera movement, and the spatial ellipses

of montage—and the mobility of vision in modernity. Recent scholarship has also tied moving-image spectatorship to ideologies of tourism (Corbin). YouTube's interface achieves a sense of mobility, despite still images and the strong possibility of a stationary user before the screen. Mobility is suggested through the interface's cartographic connotations. The screen's arrangement of tiles presents a space of exploration, through which the user can roam by selecting a quadrant that leads to a world in motion.

Fragments

Describing a moving-image document as a 'clip' implies that it remains a fragment of a larger body. Excerpted from a pre-existing work, it may nevertheless function on its own terms, accreting additional meanings and uses for viewers familiar with the source material. Non-derivative moving-image documents called clips similarly tend to be so brief that their significance is partly or entirely bound to other clips, since, when viewing short clips, users tend to build upon them by viewing others, even if they had no such intention when accessing the site.

From the moment a video is uploaded, YouTube transforms this document into a circulating body that promises greater meaning precisely through its dynamic mapping in relation to other bodies within its expanding universe. The clip's coordinates are determined along adaptable criteria, including source account data, tags (and other textual markers), viewing histories, view counts, and viewing time. This process is complex and remains resistant to easy or accurate visualization. Despite more than a billion videos circulating through its works in changing patterns as clips are added, accessed, and removed, YouTube's interface attempts a highly ordered, misleadingly stable view of its material. [3] For example, the multi-linear, multi-faceted, multi-layered potential of association that remains central to experiencing the site nevertheless adheres to the linearity of mainstream film and television. One clip follows the next within a single, designated frame. While this linearity has long been encouraged and activated through search result lists and play lists, the thumbnail grid weakens the lists' bold hierarchy and makes visible the multiple possibilities of building meaning across clips. This contrasts with the browser-based interfaces of other video sharing websites. At the conclusion of a clip on Vimeo, for example, the interface displays a horizontal band of thumbnails of related videos across the top of the page, above the embedded screen-frame. Presented on a black background, this band recalls a filmstrip and establishes the viewing process as a linear activity. The screen-frame underneath displays nothing more than the last image of the previously watched video, which at times is nothing more than a black frame. The image—and thus the process—appear confined and arrested.

An initial site search on YouTube via a web browser will produce only a vertical list of results. However, after the user watches a clip—at the moment the video terminates—the entire screen window transforms into a mosaic of smaller images, arranged in a tight, grid-like formation. With the original clip's unified field ceding to these tiles, a glimpse of the underlying network seems to rise to the surface. This pattern of nine or twelve images is nothing more than a reorganizing of the column of thumbnails that regularly runs down the right side of the page and is no more than a snapshot of the seething matrix that stretches out beyond the frame in theoretically billions of tiles, each potentially repeating in any number of other configurations of tiles within this screen frame. This display may illustrate the processes working behind the surface more evocatively than the adjacent column—even if, when read from top to bottom and left to right, it strictly adheres to the list's vertical order. Arranged in this pattern, multiple relationships are suggested across the frame, encouraging alternative sequences of viewing. You may click on one tile, for example, watch that, reach a new mosaic of possibilities based on that choice, choose another clip, watch that, then reach yet another mosaic of possibilities. At each turn, a new composite view of this presumably never-ending topography of videos presents itself. That the thumbnails fill the entirety of the frame is critical to this effect. Dailymotion's interface, for example, offers a similar pattern of thumbnails within the screen-frame after each clip, yet these are surrounded by a grey border and include time indicators as well as a header with the thumbnail and title of the previously watched clip (Fig. 3). These properties diminish any sense of the frame as a window onto another space and more closely resemble the dashboard look of the Windows 8 start page. The inclusion of the previously watched clip and its title, by tying the underlying images to what has already occurred,



Figure 3: Screen-frame of Dailymotion browser-based interface.

suggests immobility rather than accessing new terrain. The time indicators reinforce temporal differentiation among Dailymotion's images, further disrupting any sense of superficial cohesion across the frames.

In his work on mash-up culture, Eduardo Navas identifies two categories of mash-ups: regressive and reflexive. The regressive mash-up promotes multiple items by sampling them in new combinations (as with a musical remix stringing together several pop songs), while the reflexive mash-up 'uses samples from two or more elements to access specific information more efficiently, thereby taking them beyond their initial possibilities' (2007). Navas' examples include internet interfaces such as newsfeeds and maps that embed local information. Reflexive mash-ups are not only 'regenerative' mash-ups, making new sense of the material at hand, according to Navas, but also the defining basis of contemporary digital culture. YouTube's display of thumbnails within the screen-frame could be said to encompass both forms. It is regressive in its overt promotion of new material—additional clips to view—placed in close spatial proximity to each other via the thumbnail and close temporal proximity to the clip previously viewed. However, it is also manifestly reflexive in its unification of these materials from their dispersed placement within the network as a response to the foregoing choices (as indicative of potential needs or desires) of the user.

In truth, the reflexivity of the YouTube interface is commonplace in the contemporary networked digital experience and hardly merits attention. Nor is its regressive aspect—presenting multiple choices together—particularly unusual. The exceptionality of its presentation stems from the way these two come together within a visual format that suggests the embedded screen-frame is unlike the material screen of the digital experience. While the screen of the PC, tablet, or phone often contains text, image, and symbol in configurations akin to a navigational control panel, YouTube's embedded screen acts as a window that offers nothing but an endless field of images, laid out like a surface potentially extending beyond the frame to infinity. It is the screen-within-a-screen aesthetic that eliminates this topographical interface as a viable format for the YouTube app. Principally designed for smartphones and tablets, the app must accommodate visual and tactile interaction within a greatly reduced frame. Tiny tiles in a tiny window within the already minimal dimensions of a handheld screen would frustrate, rather than entice, users as they navigate the site.

In its suggestion of infinite terrain beyond the frame, the YouTube browser interface differentiates itself from other instances where algorithms and interface design retrieve and display a field of images, such as infinite scroll. As its name suggests, infinite scroll produces a vertical field of images that loads more images as the user scrolls down, to create something that resembles a lengthening patchwork quilt, until the user eventually

reaches a button to load more images. This has become a common interface component of photosharing sites such as Instagram and Flickr. With infinite scroll, even if the screen becomes a field of abutting images similar to that found in YouTube's embedded frame, the user experiences the process of generating the mash-up as she scrolls down for more images. In the example of YouTube, all trace of the clip disappears to suggest a full field of images underneath, like the view of a patchwork of farmland seen from an airplane once the clouds disperse.

Why not present users links to additional YouTube clips through such a cascade of thumbnails? Why, instead of an infinite scroll, offer them a tiny sampling, seemingly trapped within the viewer window? In opting for this configuration of images within a single frame, YouTube aligns the screen-frame of its interface not only with the contemporary forms of visuality described by Navas, but also other means of information organization that have extensive roots in the history of visual culture, from ancient art to television. When relationships are perceived across the thumbnails, for example, the interface enters into the logic of the mosaic, a form of visual expression dating back to about 500 BC. When the format is interpreted as a series of independent frames, however, the logic of the grid takes hold. [4] The grid, of course, is the organizing trope of linear perspective as developed in Italian painting in the first-half of the fifteenth century. And the history of mapmaking, conveniently enough in the current context, has resorted to both of these paradigms mosaic and grid—as fundamental cartographic strategies.

Mosaics

The term 'mosaic' has several meanings. Among them: an arrangement of small pieces of a common material producing an overall design or image, a composite of aerial photographs depicting a topography, and a virus that causes discoloration in plants. Design, topography, and virus. To a degree, the screen-frame mosaic of YouTube's interface encompasses all three. It designs for the user an image built from small units that suggests an overview of a small portion of the vast topography of more than a billion units that comprise the system. The very potential of any unit to proliferate across that topography by going viral, however, is ever-present. There will always be certain units, whether through popularity, corporate marketing strategies, or a combination of both, that play across the vast topography with precipitously rising and falling rates of occurrence.

YouTube's mosaic of tiles has an immediate corollary in the pixel field that is fundamental to digital image production itself. The 'picture element'—usually shortened to 'pixel'—is the

smallest unit of the digital image. Emerging at the end of a clip to colonize the space of the video, the nine- or twelve-image mosaic of related videos finds its visual counterpart in the nine-to-twelve-pixel fragment extracted from a field of millions, since in such a blow-up any pixel's colour values are always closely related to immediately surrounding pixels in comparison to those in the wider field. While we might think of the 5,000-year history of



Figure 4: The Lod mosaic, c. 300 AD. Image by Israel Antiquities Authority. Source: Wikimedia.

mosaics as akin to the organization of pixels to create single-image fields of unified scenes, in reality ancient mosaics encompass a variety of visual structures, including repeating the medium's fragmentary basis at an iconographic level. A third-century Roman floor mosaic excavated in Lod, Israel, is such an example (Fig. 4). The fauna theme occupying the floor's

central octagon carries over into the divided zones of associated animals that surround it. Some of these peripheral creatures appear in the centre, while others do not. As a whole, the Lod mosaic provides a visual classification system of related material and, much like YouTube's mosaic, part of the pleasure of the system is discerning relationships across zones, perhaps in differing sequences.

The mosaic of aerial photography is a means of visually reducing vast land masses to a series of images taken from an established distance as the camera moves over the area. These images are then arranged, edge-to-edge or in slight overlap, to recreate a unified field. In terms of aerially produced images today, the largest mosaic most people commonly encounter may be the satellite imagery option of Google Maps. In terms of historical examples of mass-circulated photographic mosaics, however, one may turn to the images of the Moon and neighbouring planets as shot by satellites and exploratory probes. Indeed, a visual aesthetic of extra-terrestrial exploration is the topographical composite (Fig. 5).

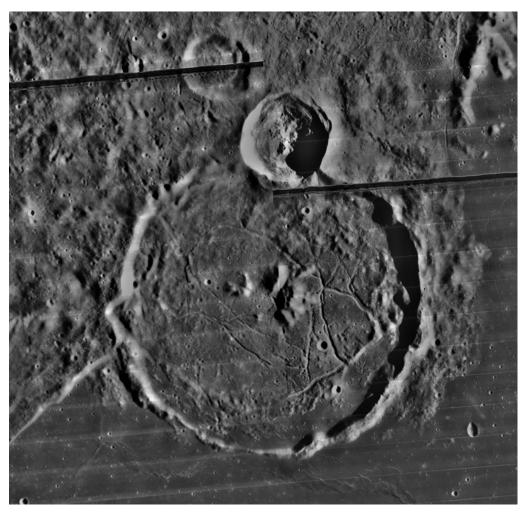


Figure 5: Lunar Orbiter mosaic of Gassendi crater and the surrounding area, 1960. Source: NASA.

Unlike film- and paper-based mosaics, digital processing now transforms these segmented fields into seamless composites through a technique known as 'image-stitching'. An example would be those images of Earth—often reproduced as posters or desktop wallpaper—that are generated from the careful arrangement of thousands of satellite images capturing small segments of the planetary surface with little or no cloud cover. In reality, the Earth is never entirely free of cloud cover (thankfully). YouTube's screen-frame mosaic recalls pre-digital or pre-stitched mosaics, where edges are discernible, creating a visualization that moves back and forth between individual unit and overall pattern. The value of each image can be enhanced by its relationship to those that surround it, producing a collective meaning greater than the individual parts.

Grids

An additional visual code found in much extra-terrestrial image-making, particularly in the early years of space exploration, is the reseau grid of fiducial markers. This system of markings built into the image-making device segments the visual field into zones of equal size and shape (Fig. 6). These markings, used in conjunction with the exact geographical coordinates of the camera at the time of shooting, allow for multiple calculations, such as

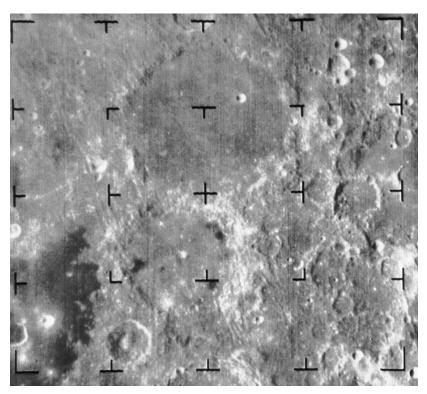


Figure 6: Ranger 8, Ptolemaeus and Alphonsus craters on the Moon, 20 February 1965. Source: NASA.

distance and altitude of objects and topographical features within the image. In this way, space photography is the direct descendant of the system of linear perspective originating in Renaissance painting.

E.H. Gombrich, in an essay on the iconographic relationships between images and maps, recognizes the relationship between aerial imagery and perspective that has been identified here. 'Aerial pictures of cities, not to speak of the exhilarating photographs of our globe from space, turn out to look very much like the maps that were compiled in a long process of measurement and refinement over the centuries', Gombrich notes. The mathematically accurate distances and scales of these maps rested not on aerial imagery, however, but optics and mathematics. '[K]nowing the curvature of the globe and the distance of the station point, the exact outlines of any continent from that point could have been predicted long before spacecraft or satellites enabled us to put the theory to the test. The theory to which I refer is of course that of perspective', Gombrich declares, noting that from the Renaissance to his own epoch the theory of perspective 'was treated as if it were a mapping procedure' (1982: 188–189).

The simple use or presence of a grid, of course, does not endow an image with the illusion of three dimensions, and the grid of YouTube's interface in no way builds such dimensionality across the screen. Instead, it adopts the rhetoric of the grid as a stable, and meaningful, means of visualizing. Unlike the mosaic, with its varying patterns and presumed relationships across fragments, the grid offers a much more rigid, unyielding structure with regular patterns of horizontal and vertical lines intersecting at right angles. [5] The grid is a recurrent, underlying structure not only of scientific visualization, as regularly witnessed with x-y graphs, and figurative imagery, but also within analytical strains of modern art. It is here, perhaps, that the framed grid of the YouTube interface gains its traction.

The grid emerges in twentieth-century avant-garde art as a means of mapping the image's flat surface onto its material support. According to Rosalind Krauss, 'Perspective was a demonstration of the way reality and its representation could be mapped onto one another'. She adds, 'Unlike perspective, the [modernist] grid does not map the space of a room or a landscape or a group of figures onto the surface of the painting...The physical qualities of the surface, we could say, are mapped onto the aesthetic dimensions of the same surface' (1970: 52). The grid of thumbnails that fill the YouTube screen-frame may be mapped onto this logic. It emphasizes the flatness of the surface and the dimensions of its frame. Perspective emerges within each thumbnail, perhaps, in the photographic representation of a three-dimensional space, but this dimensionality withers across the field of multiple thumbnails. Arranged edge-to-edge, that is, it is hard for the user to view them as individual glimpses into discrete spaces. The unforgiving superficial ordering

of the grid returns them to a surface relationship among themselves that sustains their reading as topography flattened by an aerial viewpoint typically found in cartography.

Krauss claims that the grid's entrenched inflexibility—that which makes it so reliable for analysis and measurement—is rooted in two equally present, but opposing, possibilities of conceiving the structure: centripetally or centrifugally. The grid may be centripetal by turning inward in reiterating and repeating the conditions of its encompassing frame or it may appear as centrifugally moving outward if in-frame material is perceived as merely a fragment in a greater field expanding infinitely beyond the frame's edge. As a centrifugal operation, the grid is 'compelling our acknowledgement of a world beyond the frame', according to Krauss (1970: 60). YouTube's grid-like display functions in both ways. It is centripetal in its fragmenting of any clip into a grid of images that, to a greater or lesser extent, repeat the themes or meanings of that initial clip 'mapping the space inside the frame onto itself' (1970: 61). Rather than a window, it is then like a typesetter's frame, strictly determining the composition of elements within. Yet it is also centrifugal in evoking a temporal and spatial fragment of a never-ending, always changing patchwork of clips radiating out in all directions. In that case it is a window that opens onto the topography, much like the mosaic in composite aerial photography depicts a fragment of a larger surface.

Alternatives

Munster has argued that, despite Google's aura of completeness, 'there are a number of ways in, out, and through Google's world making—of approaching an outside to the self-enclosed image horizon that bounds the Google universe' (2013: 63–64). As much can be said of its video hosting subsidiary. Whether list, mosaic, or grid, among the elements missing from YouTube's visualization of its processes of finding meaning and relevance are depth and time. Its images are fixed, and associations can only slide across the surface, without penetrating underneath. Experiments in moving-image mash-ups, often hosted by YouTube itself, can provide alternative descriptions of this system. By subverting ideas of fixity and stable boundaries, they often make citation and syntax the entirety of the visual document's significance.

Two mash-ups—one an art installation, the other an on-line piece—can serve as salient examples here, since they draw in different ways on the mosaic and the grid to suggest an entropic feedback loop. Christopher Baker's *Hello World! or: How I Learned to Stop Listening and Love the Noise* (www.christopherbaker.net/projects/helloworld) and Wreck and Salvage's *Golden Gates* (www.blip.tv/wreckandsalvage/golden-gates—283566) date

from 2008, preceding YouTube's grid display by three years. Hello World! organizes 5,000 video-diary clips found on-line into a wall-sized grid of talking heads. Baker explains that he wants viewers to experience 'a fraction' of YouTube's 'incomprehensible numbers'. 'It's important to avoid becoming completely spellbound', he says, adding 'I think contextualizing digital data in architectural settings helps us do that' (Cusack, 2012). YouTube's and Hello World's mosaics attempt the same act of inserting the clip as image into an architecture. The first is an architecture of the window, while the second is of the wall. Baker's work presents a larger frame of the topography on a scale that can be engrossing or alienating, particularly as the images move under a cacophony of vlogger (video blogger) voices.

Wreck and Salvage's silent Golden Gates, on the other hand, functions within the website frame, offering a grid of tiles strikingly similar to the YouTube interface (Fig. 7). As a mash-up, it sets in motion thirty-six appropriated point-of-view videos shot by people walking, cycling, and driving across the Golden Gate Bridge.



Figure 7: Screenshot of Wreck and Salvage, Golden Gates, 2008.

The slightly varying perspectives and framing on the same object and space create a percolating surface of correspondence and difference. The user's eyes shift from image to image as they move, allowing for multiple, multi-linear experiences of the content in a way that YouTube's stagnant mosaic menu suggests, but won't allow.

The enlarged parameters of time, number, and scale in these mash-ups echo pre-web visualizations of broadcast, cable, and satellite television, where multi-screen grids would create an image of the simultaneous transmissions of competing channels. The opening and closing shots of *Network*, Sidney Lumet's 1976 film about television news, are one example. Like such depictions, *Hello World!* and *Golden Gates* indicate how an increasingly large or dynamic view of the YouTube mosaic may paradoxically narrow or drain meaning. Remaining within the two-dimensional ordering patterns of the YouTube interface, the simple addition of motion, where tiles play out in time as clips rather than still images, allows viewers to discern new patterns that could lead to meanings beyond the linearity of the play list or clip-by-clip viewing. One can imagine what visualizing multi-directional relationships within the interface would add to this experience. Perhaps such relationships must remain hidden from the user's view and consciousness, however, to extend the length of site visits.

In 2009—that is, well before Cosmic Panda and the resulting interface aesthetics studied here—William Uricchio already had detected in YouTube its tendency 'to rely upon traditional media distinctions as a navigational aid to its users and as a means of appealing to existing communities of interest, while in fact all but flattening the media distinctions in practice' (29). With the thumbnail interface of post-Cosmic Panda YouTube, the flattening literally surfaces as a feature of the platform and the media experience it contains. By engaging the visual rhetoric of cartography, however obliquely, the screenframe thumbnails of YouTube connote the flattening rationality and access of a map. Maps also connote exploration and mobility, and this visual strategy of the YouTube interface, however simple and limited, encourages the user to construe her visit in terms of an open-ended, exploratory mission. In the movement from clip to clip, the gridded, mosaic view of the frame becomes a navigational system, representing the layout of new terrain the user can enter with each click or tap, continually returning to the mosaic-map after each foray.

Biographical note

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Notes

- [1]. In this vein, it should come as no surprise that YouTube's first feature film, edited from its collection of user-uploaded clips, was Life in a Day (Kevin Macdonald, 2011), which sought to represent the sum of human activity around the globe on a single day. The film feeds the perception of YouTube as a totalizing visual apparatus, yet presents it as a tool that organizes this totality in ways that are comprehensible and significant to its user-explorers.
- [2]. 'We thought that the idea of a panda in space was hilarious and awesome', claims Brian Glick, one of the YouTube product managers involved in the redesign. See 'What Inspired the Name of Cosmic Panda?', http://www.quora.com/What-inspired-the-name-of-Cosmic-Panda#.
- [3]. YouTube claims that, on average, 100 hours of video are uploaded to the website every minute, which figures to over 50 million hours of video a year. If the average video is fifteen minutes long, this would produce over 210 million uploads a year. See http://www. youtube.com/yt/press/statistics.html.

- [4]. The 12-thumbnail display adheres strictly to the logic of the grid, while the 9-thumbnail display only closely resembles it, since the thumbnail in the upper left appears slightly larger than the others in this format.
- [5]. The grid has always presented problems for video, from the precariousness of vertical-hold in television through the 1970s, to the walls of monitors that either offer up a dizzying array of images or violent grillwork across the image. Beyond these examples, however, Hannah Higgins (2009) has demonstrated the persistence of the grid as an organizing trope throughout history, from ancient building techniques to contemporary computer programming.

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FCJ-170 Challenging Hate Speech With Facebook Flarf: The Role of User Practices in Regulating Hate Speech on Facebook.

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Abstract:

This article makes a case study of 'flarfing' (a creative Facebook user practice with roots in found-text poetry) in order to contribute to an understanding of the potentials and limitations facing users of online social networking sites who wish to address the issue of online hate speech. The practice of 'flarfing' involves users posting 'blue text' hyperlinked Facebook page names into status updates and comment threads. Facebook flarf sends a visible, though often non-literal, message to offenders and onlookers about what kinds of speech the responding activist(s) find (un)acceptable in online discussion, belonging to a category of agonistic online activism that repurposes the tools of internet trolling for activist ends. I argue this practice represents users attempting to 'take responsibility' for the culture of online spaces they inhabit, promoting intolerance to hate speech online. Careful consideration of the limits of flarf's efficacy within Facebook's specific regulatory environment shows the extent to which this practice and similar responses to online hate speech are constrained by the platforms on which they exist.

Introduction

A recent spate of high profile cases of online abuse has raised awareness of the amount, volume and regularity of abuse and hate speech that women and minorities routinely attract online. These range from the responses garnered by Anita Sarkeesian's (2012; 2014) video series 'Tropes vs. Women in Video Games,' which included photoshopped images of Sarkeesian made to appear bruised and brutalised, (Lewis, 2012) to the abuse directed at the activist Caroline Criado-Perez following her campaign to have a woman represented on a UK banknote (Guardian Staff, 2014), to the countless instances of more pernicious 'Everyday Sexism' documented by the activist group of the same name.

As a result of these and a host of similar recent events, it has become increasingly apparent that online abuse and instances of hate speech directed at women, people of colour, transgender individuals and other minorities is on the rise in many online spaces. This awareness is so prevalent that Robinson Meyer (2014) writing for *The Atlantic* in late October 2014 described the GamerGate movement (an online hate mob responding to the increasing visibility of women in the games industry and in gaming culture, and a kind of culmination of these larger trends) as 'an existential crisis for Twitter.' This is particularly the case given that Twitter has become an important public space for users in not just the videogame industry but also similar 'cultural communities that have strong online presences, including tech, science fiction, fantasy, comics, and film' (Meyer, 2014). The mental and emotional burdens borne by the women and minorities that use these platforms are clearly disproportionate, as they expose themselves to almost limitless online abuse. While many users clearly feel that this situation is unacceptable and can no longer be ignored, the question remains, what can practicably be done about the problem of harassment and hate speech on social networking sites like Facebook and Twitter?

In part, this problem is constituted by the approach taken by many social media sites, as they deliberately position their services in a very particular relationship with their users in order to limit the responsibilities they have towards them. Tarleton Gillespie (2010) has productively focused on the terminology of the 'platform' itself, frequently deployed by sites like Twitter and Facebook, arguing that it does important discursive work positioning these services and managing expectations across users, potential legislative regulators, and advertisers – eliding and diffusing the tensions that might otherwise arise from their competing interests. As Gillespie (2010: 11) notes:

... online content providers who do not produce their own information have long sought to enjoy limited liability for that information, especially as the liabilities in question have expanded from sordid activities like child pornography and insider trading to the much more widespread activities of music and movie piracy.

Missing from this list of indemnities that platform holders regularly seek for themselves is the problem of hate speech generated on and transmitted through social media platforms. Many platforms simply do not want the burden (whether economic or legal) entailed by responsibility for dealing with hate speech, and their arguments against the imposition of further regulation often rest upon claims as to the 'impossible' scale of the problem. In a similar fashion, intervention by state authorities often faces a host of issues preventing or hampering effective regulation of online hate speech. These include cultural and legislative reluctance, as well as technical or practical difficulties facing enforcement and regulation of the internet, which many governments and state agencies are not well placed to handle. As a result of these issues, users of online services are often left to take responsibility for hate speech themselves. With this paper I explore one case of users acting creatively within Facebook's technical and regulatory environment to take small-scale actions against hate speech.

I begin by briefly considering the literature addressing questions of hate speech and the varying degrees of comfort different national traditions have with greater or lesser state intervention in speech. This provides important context for the later discussion of the practice of flarfing. Examining the literature around online hate speech reveals a complex negotiation between states, internet intermediaries, and the agency afforded to users themselves, with this paper taking a particular focus on the regulatory environment presented by Facebook. The remainder of this paper discusses a little-known creative activist strategy employed on Facebook which redeploys the site's tagging algorithm to 'flarf' – posting absurdist, nonsense, or subtly reflexive messages to Facebook threads and status updates, often those containing bigotry, sexism or hate speech. I examine this practice in the context of the ongoing debate around internet hate, situating the case of Facebook flarf as a creative, discursive activist practice deployed by individuals and small communities as a user-led response to harmful speech online. I argue that it demonstrates the narrow utility of individual citizens' creative small-scale interventions in online discourse, acknowledging that it is importantly limited in its ability to address the scope of the problem sufficiently, existing as it does within the limitations of the regulatory spaces both Facebook itself and larger international contexts define.

This paper adds to the evidence for what Banks (2010: 234) calls the need for 'a broad coalition of citizens, government and businesses' in addressing hate speech online, and provides a clearer picture of what kinds of creative responses may be and have been available to individual users in the interim. Users can be instrumental in taking responsibility for the promotion of online cultures intolerant of bigotry and hate speech on social media platforms, as Banks (2010: 238) suggests, but it is important to also acknowledge the limitations and opportunities created by the context of these platforms own regulatory responses.

The research undertaken for this paper was performed by observing Facebook user activities online over a period of years, though the majority of examples are drawn from the period which saw the most flarf activity, during the year 2012. This approach necessitated by design a reliance on personal contacts drawn from the author's network of activist acquaintances, as well as some observation of public posts made by other users unknown to the author. The relatively small scope of the study reflects the transient and contingent nature of these kinds of online user practices, existing within and frequently in response to the changing and contested regulatory contexts of the platforms and services themselves. The precise number of users involved in the practice is incredibly difficult to determine, given the nature of the Facebook platform and the fairly organic manner in which the practice grew from a larger community context. It is safe to say, however, that the practice was not widespread, and was very much a product of a particular online community at a certain time and place.

Despite the limited extent of its application, Facebook flarf remains important for our understanding of the development of these sites and the cultures that emerge alongside them, as users test the extent of their personal agency and their ability to 'take responsibility' for the problem of hate speech online. The examples included in this paper were chosen for their ability to demonstrate the key features of Facebook flarfing, from a very limited set of materials collected at the time, or just after, these incidents occurred. The 'real time' nature of much of the Facebook platform and the algorithmic selection of material it chooses to present in the news feed make the discovery and documentation of examples that illuminate these practices particularly difficult. All examples are drawn from what were at the time of writing publicly visible 'posts' and 'pages' on Facebook.

Responses to Internet Hate

When examining how the issue of harmful speech online has been addressed, an obvious division appears, based quite clearly on the differing historical and political traditions of the United States and Europe. The former's history and culture of resolutely defending free speech under the protections of the first amendment causes some friction with the latter's greater comfort with state-based intervention in the prohibition of hate speech. This comfort can be largely attributed to Europe's recent history and experiences with hate speech in the lead-up to the Second World War. It reflects an awareness of its role in enabling the demonisation of minority groups, ranging from Jews and Roma to homosexuals and the disabled, acts that prefaced the Holocaust.

Awareness of the unique problems presented by internet hate speech dates back at least to the early BBS (Bulletin Board System) era. Chip Berlet (2000) has described the early history of US based hate sites and the range of responses, from individual hackers to US Government efforts and the work of prominent civil liberties groups who have extended their concern for freedom of speech protections in the public sphere to also encompass speech on the internet. Expanding on this history, Frydman and Rorive (2002) have examined the involvement of "intermediaries" such as ISPs in preventing or removing hate speech online. While acknowledging that European legal frameworks are likely to give 'public authorities and human rights activists... better tools to limit the influence of racist, Nazis, anti-Semitic and other kind of hate speeches on the Internet,' they caution that it could be a "slippery slope" to new regimes of censorship (Frydman and Rorive, 2002: 55). Intermediaries also include websites and web services like Facebook and Twitter, and I return to discuss these sites and their typical reluctance to intervene in a moment.

The concern that too much state intervention in these services may be a "slippery slope" to regimes of censorship appears most strongly and is repeatedly emphasised in American scholarship on the issue, such as Barnett's (2007) *Untangling the Web of Hate*, which examines the US Constitution's first amendment protections as they apply to hate speech online. Through a content analysis of the material hosted on hate sites such as Ku Klux Klan and Neo-Nazi websites, Barnett applies the US Supreme Court's jurisprudential tests of what constitutes *unprotected speech* according to the first amendment and finds that the vast majority of material hosted on these US based hate sites would be considered protected expressions. Similarly, Foxman and Wolf's (2013) *Viral Hate*, produced with the support of the Anti-Defamation League (a political lobby group founded primarily to counter anti-Semitism), articulates this distinctly American position on hate speech with greater nuance than some first amendment advocates who are reluctant to view any restrictions

on speech as acceptable. In Foxman and Wolf's (2013: 60) view, hate speech 'laws are the least effective way to deal with the problem.' Instead, they argue:

... the best antidote to hate speech is counter speech – exposing hate speech for its deceitful and false content, setting the record straight, and promoting the values of respect and diversity. (Foxman and Wolf, 2013: 129)

Though a noble goal, it is clearly unable to account for the unequal burden that it places upon individuals most harmed by hate speech. Women and minorities are, in effect, caught between a lack of state regulatory intervention in online hate speech, and the reticence of internet services such as Facebook and Twitter which, as Gillespie (2010: 12) remarks, deploy the rhetoric of the platform in order to position themselves as a simple 'facilitator that does not pick favourites.' Gillespie (2010: 11) unpacks this opting-out of intervention, explaining that:

... in the effort to limit their liability not only from...legal charges [arising from users infringing copyright] but also more broadly the cultural charges of being puerile, frivolous, debased, etc., intermediaries like YouTube need to position themselves as just hosting – empowering all by choosing none.

The implication of this state of affairs is that those harassed are now left to address and take responsibility for the conditions of their own harassment via 'counter speech' – if we take Foxman and Wolf (2013) at their word. Challenging their fairly simplistic conception of efficacious 'counter speech' is a body of work from feminists and other theorists who criticise the conception of the neutral liberal state and the 'marketplace of ideas' assumptions upon which these types of claim rest.

Representative of the more European perspective, Abigail Levin (2010: 1) argues that the idea that the state should remain a neutral facilitator of a 'marketplace of ideas' which assumes hate speech is defeated by truthful, efficacious counter speech (Foxman and Wolf, 2013) is incompatible with another commitment of the liberal state – that of the equality of citizens, which is often sacrificed in service of non-intervention in the expression of ideas. Most crucially for its theoretical legitimacy, Levin (2010) argues the hands-off neutral state does not lead naturally to better (or more truthful) ideas winning out via competitive market forces, since among other reasons:

... our systemically racist, sexist, and homophobic society has had the effect that certain dominant racist, sexist, and homophobic views have become so deeply held as not to be amenable to rational discussion, with the effect that minorities' and women's voices are not heard fairly in the marketplace. (Levin, 2010: 1)

This sentiment echoes a body of literature pointing towards the amount of work required to produce free markets themselves, for instance Karl Polanyi's *The Great Transformation* (2001 [1944]) and Nikolas Rose' *Powers of Freedom* (2004 [1999]: 65), along with a host of others who have criticised the 'neutral marketplace of ideas' on a variety of grounds (see: Brazeal, 2011; Goldman and Cox, 1996; Sparrow and Goodin, 2001). Levin's (2010: 4) conclusion, drawn with regard to the current skewed marketplace, is that 'the state as a neutral facilitator of private ideas is untenable and must be dropped' and an interventionist liberal state conceptualised. Such ideas apply just as much to social media sites' reluctance to intervene in their users' generation of content.

Addressing concerns that immediately follow any proposed greater state interventionism and the automatic cries of 'censorship' that ensue when the prospect of state intervention into speech and truth claims are raised, both Judith Butler (1994) and Frederick Schauer (1994) have offered important critiques of uncritical understandings of censorship as simply 'preference frustration' without consideration of the impact of state power and discourses on the formation of these preferences themselves. In other words, the neutral marketplace of ideas is not, and cannot ever be, perfectly and entirely neutral.

Banks (2010: 234) construes enforcement as the main difficulty for contemporary European and other nations' interventionist approaches to hate speech:

[The] rise in hate speech online is compounded by difficulties in policing such activities which sees the Internet remain largely unregulated. Criminal justice agencies are unlikely to proactively dedicate time and money to investigate offences that are not a significant public priority. Consequently, the police will rarely respond to online hate speech unless a specific crime is reported.

This reluctance to intervene is repeatedly encountered when individuals seek intervention by state authorities such as US police departments. For example, in early 2014 a high-profile piece discussing online hate speech by journalist Amanda Hess (2014) detailed her own experiences with online threats to her person, the mental and emotional cost of

the permissiveness of online hate speech directed at women in the United States, and US law enforcement's prohibitive jurisdictional limitations and frequent reluctance to investigate the majority of these incidents. This seemed to set the pattern for the year, as in October of 2014, feminist media critic Anita Sarkeesian made headlines when Utah State University received a highly credible and detailed anonymous threat to carry out a mass shooting if Sarkeesian refused to cancel a speaking event (Wingfield, 2014). Because of Utah's concealed carry law, the police in that state would not (or could not) prevent attendees from carrying weapons into the meeting, and the event was subsequently cancelled. Examples like these underscore the difficulties facing effective state regulation, given the practical reality that authorities in various nations (none less than the United States, where many internet sites and social networking sites are based) cannot be relied upon to do the work of policing and preventing hate speech, particularly online.

Given the issues state authorities and legislators face, one might be tempted to hope that internet intermediaries such as social networking sites might take the initiative to combat the issue of online hate speech themselves. However, barring one significant victory which I discuss later in this paper, many sites (Facebook included) have been reluctant to take a more proactive role in preventing or responding to hate speech on their services. The reasoning for this is partly due to a lack of legislative compulsion – as we have already seen, the United States is reluctant to legislate against hate speech – and partly because sites like Facebook must negotiate the competing interests of users, advertisers, and government legislatures (Gillespie, 2010: 7). In order for these sites to function, and remain profitable, they:

... must present themselves strategically to each of these audiences, carve out a role and a set of expectations that is acceptable to each and also serves their own financial interests, while resolving or at least eliding the contradictions between them. (Gillespie, 2010: 7)

While Banks (2010: 234) rightly believes that 'a broad coalition of government, business and citizenry is likely to be most effective in reducing the harm caused by hate speech' this ideal scenario does not seem likely at present. It may be unjust to expect individual users (particularly those most harmed by hate speech) to take responsibility for online hate speech, but from a practical perspective Banks argues there is still a role to be played by users of social media sites. He concludes that:

... individual responses to online hate may only have a limited impact on access to online material, but the degree of responsibility of individual users can both promote a culture of intolerance towards online hate and contribute to efforts to 'reclaim' the web. (Banks, 2010: 238)

While Banks' argument is persuasive, besides 'alerting relevant authorities to incidents of cyberhate which may warrant law enforcement intervention' (Banks, 2010: 238), he mostly leaves unelaborated what precisely is entailed by his call for individual users to take a degree of responsibility for online culture in spaces like Facebook and Twitter. Furthermore, his claims to the minimal effectiveness of these individual responses may remain unconvincing for those who hold to US approaches that eschew state regulation in favour of individual counter speech.

In light of this context, I now turn to the creative activist practice of Facebook flarf as a method of challenging individual incidents of hate speech on the site. I interpret this practice as users taking a degree of responsibility for online hate speech and attempting to do something about it. This case study demonstrates the utility (and limits) of these individual responses, and perhaps more crucially, shows one way in which users at a particular moment attempted to 'reclaim the web,' negotiating and acting within the regulatory regime that Facebook presented in 2012 when the practice was most active. I argue that Facebook flarf belongs to an emerging trend of discursive activist strategy that takes an agonistic approach to online discursive norms, repurposing some of the tools and tactics more traditionally associated with online trolling, but which are more simply reflective of current internet culture, described as a culture of ubiquitous memes (Phillips, 2013; Leaver, 2013).

What is Facebook flarf?

Facebook flarfing consists of tagging Facebook pages and apps in text fields such as status updates and comment threads, building up strings of phrases into an often-absurd or ironic comment, message or poem. Introduced by the site sometime in late 2009, a tag is made by typing the '@' symbol followed by one or more characters, resulting in the appearance of a drop down text box with options reflecting choices suggested by the tagging algorithm, chosen from the pool of total Facebook pages. Selecting one of these options inserts the name of the page or app into the text field which then appears in blue as a hyperlink, visually distinguishing the tag (or 'flarf') from 'ordinary' text comments which appear in black. Tags may be anything from a single letter or word up to whole sentences or even paragraphs of text, and this otherwise innocuous technical feature, most commonly used for tagging individual users, briefly blossomed into a rich, if relatively niche, variety of poetic and activist practices.

The exhausting breadth of pages that one can tag in order to flarf transforms it into a creative, playful practice of digging through the extensive source material, filled with cultural detritus, typos, and memes that make up the site. The distinctive content of this giant archive of text is primarily Facebook page titles, populated by the hundreds of millions of Facebook users over the many years the site has existed, giving Facebook flarf much of its distinctive character. As a result, flarf poems and comments take on a characteristically 'Facebook' feel, involving cultural tropes the site has facilitated, such as briefly popular meme pages that conform to certain repeated tropes or structures – for example, the myriad 'The awkward moment when...' pages, a meme that was quite popular on the site around 2011.

In attempting to describe the effect and aesthetic of Facebook flarf, Caleb Hildebrand (2012) suggested that it repurposes the objects of preference (pages that people have 'liked') to subversive ends, and that it 'asks naïve users of [Facebook] to consider the ways in which their sincerely expressed sentiments may be twisted and blasphemed.' Earnest expressions of 'likes' and interests, captured in the form of Facebook pages, become hijacked by playfully irreverent flarfers and the noise of these nonsense tags – by standing out in their distinct, hyperlink-blue text – adds to an aesthetic of confusion or disarray that is often in stark contrast to the otherwise clean corporate experience of Facebook. This effect can also be viewed as a process of 'personalisation', or user-customisation of the Facebook environment – an attempt to 'take control' or have some say in the tone or feel of an online space. In the next section I return to this theme in order to connect this impulse with a sense of taking responsibility for online spaces and the cultures that emerge within them.

Facebook flarf has roots in an earlier poetic form based around tailoring Google searches to achieve exquisitely bizarre results. The poet Gary Sullivan, who was involved with these early efforts (emerging as early as 2001), has described the practice as emerging in response to the sombre, patriotic mood that descended upon the US post–9/11 (Sullivan, 2009). Calling it an early symptom of the ironic phase of US culture, early examples of poetic flarf were often filled with ethnic and racial slurs, using repeated Google searches with obscure and unrelated strings of words (e.g. "peace" + "kittens" or "pizza" + "kitty") as a way of finding offensive, horrible or absurdist text to share amongst a community of internet-savvy poets (Sullivan, 2009). In his history of the practice, he gives a three-pronged definition of flarf as a particular noisy/messy/irreverent aesthetic (similar to the aesthetic described above), as a verb (as in bringing out something innately 'flarfy' about a text) and, importantly, as a community practice (Sullivan, 2009).

Facebook flarf is often performed as part of a small group or community, such as the Alt.

Lit community, which was responsible for adapting the practice to Facebook. A diffuse and difficult to define online social movement centred around self-publishing, Alt.Lit writers and poets like Steve Roggenbuck played a large role in popularising the use of Facebook flarf (Roggenbuck, 2011a; Roggenbuck, 2011b). Hildebrand (2012) presents screen captures of Roggenbuck interacting with his fans and fellow community members, as they take turns posting short absurdist messages in combinations of flarf tags riffing off of each other's postings. Taking the lead in a post, Rogenbuck's comment "Hashtag Whale Sex" (formed by tagging Facebook pages 'hashtag' as well as 'whale' and 'sex') elicits response like "Hashtag Whale Hunger Games" (a combination of tags for 'hashtag' 'whale' and 'hunger games'), as well as "Hashtag Haveing Fun" [sic] (pages 'hashtag' and 'haveing fun' [sic]). Flarf seemed in many early instances to beget flarf from others in a contagious and spontaneous elicitation of group activity, with flarf threads often degenerating into absurdity while facilitating mutual engagement with community members.



Figure 1

As is clearly on display in Figure 1, left on a publicly shared photo posted to Roggenbuck's Facebook wall in mid 2012, much of the flarf is absurdist, vaguely sexual or confrontational, echoing earlier pre-Facebook found-text flarf. Many references in the thread to 'yolo' (You Only Live Once, an acronym peaking in popularity and cultural awareness at the time) give the flarf a distinctly pop culture and timely feel. While the pages tagged ("What you lookin' at? You all a bunch of fuckin' assholes.") might be read as antagonistic or confrontational if expressed outside this context, being on a prominent figure's Facebook wall contributes to this being more of a playful public performance than a provocative activity.

The practice gels with what Whitney Phillips has observed as the changing relationship between trolling as a practice and the cultural signifiers such as memes (which are often used in flarf posts) that would once have identified these activities more clearly as 'trolling.' Phillips (2013) notes that, 'what used to provide unequivocal proof that trolling was afoot no longer (necessarily) denotes anything, other than a basic familiarity with memes.' Likewise, when evaluating a public Facebook page organised to protest the Australian broadcast coverage of the 2012 Olympic games which also frequently deployed memes and tropes associated with trolling and troll culture, Tama Leaver (2013: 226) has noted that 'the iconography of trolling, if not the wholesale practice itself, has entered mainstream culture, moving away from the subcultural fringes.' In flarf postings on Facebook we often find something perhaps even more reflexive: a subculture (Alt.Lit poets) repurposing the ubiquity of memes and redeploying its artifacts (Facebook pages) for an altogether different subcultural practice.

Facebook flarf in general and distinctly activist deployments of flarf in particular, seemed to peak in 2012, and instances of the practice have become fewer and farther between. There was a particularly noticeable decline in its use for activist ends around the same time, possibly attributable to both technical changes to the Facebook platform (consideration of which are beyond the scope of this article), and more importantly to changes in Facebook's regulatory environment, particularly around enforcement of its hate speech policies, which I turn to in the final discussion. But for a while Facebook flarf seemed on the verge of becoming a more widely known and accepted practice with potential to alter the content and tone of online discussions in the circles of those who deployed it. In the next section I describe some of these more active and confrontational uses of flarf, within the limited scope for individual agency allowed within Facebook's regulatory context.

The Utility of Facebook Flarf

On the 18th of January 2013 Melbourne based Facebook user Kristina Arnott left a public comment on the wall of McDonald's Australia's public Facebook page. Her complaint refers to a McDonald's advertisement that was screening on free to air television at the time, and it quickly attracted likes and comments from other Facebook users:

Is it really necessary to include stupid young men beeping at a woman in your advertising? And that woman smiling shyly as if she is flattered and even enjoys such interactions? I don't know a single woman who likes being beeped at or yelled at or leered at from cars, in fact most of my female friends find it annoying or even enough to make them feel a little uncomfortable in certain circumstances. Do you really need to encourage such behaviour by further normalising it and making it seem like a positive experience for all involved?? (Arnott, 2013)

The post, which was publicly visible and thus able to appear in the newsfeeds of those whose friends liked or commented on the post, quickly gained a significant amount of 'likes' and attention. Many however disagreed with Arnott's assessment, and dismissed her concerns, with one (male) commenter telling her to 'settle down' and another (also male) telling her to 'find something better to complain about.' The thread was quickly derailed from initial discussions of the advertisement by commenters, who made sexist jokes and steered the discussion into irrelevant territory. It initially received only a small amount of engagement from individuals attempting to argue against or reason with these detractors.

Several acquaintances of mine noticed the thread and began intervening, first with earnest comments and attempts to engage argumentatively, with what Foxman and Wolf (2013: 129) would call 'counter speech' that revealed 'its deceitful and false content.' When it quickly became clear no good-faith discussion was to be had with these detractors, my acquaintances began posting noisy, agonistic and nonsense flarf. I joined in myself and, along with a small group of acquaintances, began leaving flarf comments which referenced or played with the original nature of the complaint, such as 'I Wish I Were Diving In a hotted up stolen taxi Beepin at random pedestrians & waving just to mess with their heads Hard Cunts' [sic]. Other comments included very simple or short non-sequiturs, such as 'börp' [sic] and longer phrases made out of several stitched together page names like:

I was only 19 when i stopped talking to you, i found out how depressing u made my life "Sandwich Jokes!!! DeR DaH Im FuCKInG sTuPiD IAIa"" it is so hard being so fucking funny all the time NOT [sic]

Even with a small number of commenters, it was possible to partially drown out the offensive jokes and comments under a tide of blue-text nonsense, which often played with or obliquely commented on the sexist comments that were being left. The inclusion of a reference to "Sandwich Jokes!!!" was clearly referring to a comment left earlier in the thread expressing the classic sexist trope 'make me a sandwich,' which the flarf here was criticising and calling out for not being funny. From a practical perspective, the flood of flarf comments was making the derogatory comments harder to see, both visually (due to the blue text 'noise' that stood out and surrounded them) and statistically (with more nonsense comments quickly being left than harmful ones). A feature of Facebook comment threads is that once a thread reaches a certain number of comments earlier ones become hidden and a user needs to select "view previous comments" in order to expand the thread and see comments left earlier. This leads to a dynamic in which it becomes something of a contest over who can have the last word, with newcomers to the thread less likely to see the offensive comments, having to scroll back up to see them. As trifling an achievement as this may seem, moving comments further up a thread chronologically by adding to the end of a thread is precisely the kind of limited strategy afforded to individuals in their responses to hate speech on Facebook. For one, it does nothing to prevent new instances of hate speech from being posted, merely hiding older ones. It also doesn't take flarf in particular to do this kind of flooding of threads, however the nature of flarf as somewhat viral, often eliciting further flarf responses from others, does contribute to its efficacy in this respect. Flarf also provides users with a pattern or template to employ when they wish to flood or drown out hate speech in threads like this, perhaps performing a similar function to the 'SAGE' feature of the 4chan imageboard – when a user wishes to avoid 'bumping' a thread on 4chan, either to express disagreement or dislike, and avoiding drawing further attention to the thread, users can place 'SAGE' in the 'options' field and the post will not be bumped to the top of the imageboard in question upon posting.

These socio-technical practices carry real weight, often acting as 'boundary-policing social practice' (Manivannan, 2013) and can be considered a somewhat more efficacious aspect of Facebook flarf than simply the practical aspect of flooding deleterious comments to make them harder to notice. Furthermore, I would position the kind of action undertaken by these flarf commenters as what Frances Shaw (2012: 42) calls 'discursive activism', which she defines as:

... speech or texts that seek to challenge opposing discourses by exposing power relations within these discourses, denaturalizing what appears natural (Fine, 1992: 221) and demonstrating the flawed assumptions and situatedness of mainstream social discourse.

The way flarf performs this challenging of norms is twofold: firstly by demonstrating both competence or mastery of the Facebook platform itself and secondly by being a form of meta-textual play that can be read as a form of personalisation and imposition of a 'flarfy' tone, style or aesthetic upon an online space. I would argue that flarf is similar to the creative use of emoticons and other typographical elements unique to digital textual communication, a phenomenon Brenda Danet (2001) has called 'Cyberplay.' These kinds of personalisations demonstrate a high level of experience with navigating the social and technical spaces of Facebook – flarf-tagging being a relatively rarefied practice. Significantly for this argument, Kelly, et al. (2008: 2381) agree with this interpretation, having found that, in certain online discussion situations, greater employment of these kinds of textual 'personalisations' (such as emoticons, abbreviations like 'lol,' and to which I would suggest we could add flarf) often result in the users employing them being perceived as more experienced, or more intelligent than users who do not personalise their text.

Engaging in flarf is also implicitly a form of meta-textual discussion, drawing attention to the medium of communication itself. Facebook flarf performs a reflexivity that makes it very difficult to forget one is speaking or writing on Facebook whenever it appears. This is both because of the contrasting blue hyperlink text colour that makes it stand out from 'ordinary' text, and because it frequently, often as much by design as by incidence, makes reference to or invokes the cultural tropes of Facebook itself. Engaging in flarf can send a meta-textual message to those leaving hate speech comments to remind them that they are on the shared-public space of Facebook, and without having to say as much, that the flarfist(s) are actively refusing or resisting entering into 'good faith' discussion with this material, thereby relegating it to 'beneath discussion.' Metaphorically, this could be compared to a situation where, in a face-to-face conversation, one or more individuals turn away from or present their backs to a person in order to communicate social displeasure or a wish to exclude someone. In the thread on the McDonald's Facebook wall, some good faith discussion with the dissenting parties who rejected Arnott's argument was attempted, but was quickly redirected into flarf-based mockery when this good faith dialogue was not reciprocated. Not much else can be done when those espousing hate speech cannot even be engaged with sincerely. Foxman and Wolf's (2013) claims about the efficacy of counter speech seem to miss their mark when facing such recalcitrance as regularly occurs in online spaces, a fact no doubt encouraging users who wish to take responsibility for harmful speech online to explore alternative methods of engagement, like flarf.

A similar dynamic of refusal-to-engage occurred on a thread on the Facebook page for fictional character and "lambassador" Sam Kekovich, created for a series of advertisements promoting lamb eating on Australia Day. One exchange in this thread consisted of subtly poking-fun at the reactionary nature of some of the sites fans and their use of the phrase

"un-Australian" – a dogwhistle term with often racist connotations. Most of the preceding comments were subtle criticisms of the page made by playing at ignorance, however once other sincere commenters were drawn to engage with them, flarf made an appearance, communicating something beyond just the content of the flarf, and again indicating some kind of social displeasure or opprobrium via meta-textual play. At one point in the thread, a fellow user (unknown to me) directed a comment at my acquaintance, to which he replied with a pithy plain-text 'let me help clear it up a little for you' followed only by a single, lengthy flarf tag constructed out of one extraordinarily-long page title:

i dont like drama, childish people. uma hella cool person till uu disrespect me . i hate shit talkers . if uu referrin tah me in a status go on ahead n tag me in it...if uu got balls enuff . i dont care about much anymore thats just how thee cookie crum [sic] (Midworth, 2012)

The posting was ambiguous about the extent of its seriousness, repurposing a typo-strewn cultural artifact of the Facebook platform, and yet the sense of displeasure was clear. This social aloofness and unwillingness to engage 'normally' or sincerely with hate speakers signalled by flarf also works to send an implicit message to many other potential or actual sincere commenters, who may well share the same concerns about the potentially racist nature of the discussion or the Facebook page itself, and the same objections to the hate speech. The message it sends to these potential allies is do not waste your time, and particularly do not bother engaging (or at least, do not bother engaging in good faith since it will only cost you time, energy or emotional resources). This can be doubly important given the ambiguous context in which much internet discussion in the quasipublic space of Facebook now occurs. As previously mentioned, the classic 'tells' of trolling no longer denote anything more than what Phillips (2013) describes as 'a basic familiarity with memes' leaving earnest individuals keen to challenge, address or in some way take responsibility for online cultures of hate, without any clear indication of what is worth spending their time or energy engaging with. When it is used in this way, Facebook flarf can communicate to other earnest and well-meaning critics of hate speech that there are people who are willing to 'play' with these hate speakers (sincere or otherwise), and to 'outdo' potential trolls. Flarf displays a willingness to take on, and even enjoy playing with commenters on these objectionable pages, so those for whom this is an emotionally charged issue (as much hate speech is for its intended recipients) do not have to. In this way it offered, for the period that it was most active, a way for some users of the site to take charge and take responsibility for the online spaces they inhabited, in much the way Banks (2010) calls for.

A significant limitation on flarf's practical efficacy, then, is that it largely relies upon

individual actions – to achieve much of the effects mentioned above (particularly the practical hiding of hate speech behind a flood of blue text) it requires a relatively sizeable and active community relative to the offending hate speakers. Those wishing to be effective with flarf and make a significant contribution to online culture on Facebook must be willing and able to respond to hate speech in a timely manner, since much of the impetus behind this goal is preventing the offending hate speech from being seen. All of flarf's positive effects – from the drowning out of hate speech, to expressing opprobrium towards it, as well as contributing to online norms – are significantly diminished when deployed by only one or a small number of individuals. In other words, on the "neutral" Facebook platform which the service provides, Facebook flarf still commonly relies for success on strength in numbers and the organisation of communities, which I only observed happening in an ad hoc and small-scale way in the community of users deploying it.

In the McDonald's thread, the 'drowning out' function was limited in that it was only effective for the period flarfers were active and available (and invested enough in the thread) to keep commenting, which petered out as the discussion went on into the late evening and people drifted off to bed or other activities. Furthermore, a significant amount of the initial flarf that was left was later deleted over the next hours or days, presumably by Facebook itself, likely in response to other users 'flagging' the comments as spam (perhaps done by commenters expressing the sexist speech themselves). The flarf itself may have fallen foul of Facebook's community standards, the most likely culprit being Facebook's community standards regarding 'phishing and spam,' yet the description of what counts as such only currently refers to unsolicited commercial contact. It is conceivable, however unlikely, that the comments that went missing were removed by the operators of the McDonald's Facebook page itself, however there was no other indication that the thread was ever observed or moderated by the page owners who, much like Facebook themselves, would probably prefer to avoid liability or responsibility for what is said on their page. If it was the administrators of the McDonald's Australia Facebook page, they deemed it fair to leave some flarf but not others (including some flarf containing profanities), and as far as it was possible to tell they also removed none of the sexist comments. An alternative explanation altogether is that some flarf posts tripped automated spam detection and prevention algorithms, which possibly automatically flagged them for review by Facebook's moderation staff, explaining their later disappearance.

This is yet another example of the regulatory environment that Facebook presents to users, one that is often opaque and that needs to be constantly negotiated by users wishing to explore what freedom and constraints they face when attempting to take responsibility for online culture and challenge hate speech on Facebook. In the following section I turn to discuss in more detail this regulatory environment and some attempts that

have been successful at pressuring Facebook into changing it. This informs both how we view Facebook flarf's history and potential, and why it may have emerged when it did. It also illuminates details of the broader landscape facing users and groups invested in the elimination of the worst aspects of hate speech online.

Facebook's Regulatory Environment and its Relationship to Individual Action

Facebook flarf can be interpreted, at least partially, as a response to Facebook's historically lacklustre and inconsistent policing of its aforementioned community standards — a set of regulations with greater room for interpretation (even misinterpretation) and more lackadaisical enforcement than the stricter (and often legally binding) terms of service. As of late 2014, Facebook's own community standards:

... [do] not permit hate speech, but distinguishes between serious and humorous speech. While we encourage you to challenge ideas, institutions, events, and practices, we do not permit individuals or groups to attack others based on their race, ethnicity, national origin, religion, sex, gender, sexual orientation, disability or medical condition. (Facebook Inc., 2014)

As mentioned earlier in Frydman and Rorive's (2002) discussion of intermediaries, Facebook does not take an active role policing the content of expressions uttered on its platform, as it is not legally required to. This is because Facebook is (presumably, thought this has likely not been tested in court) protected by the same safe harbour provisions applicable to internet service providers and internet hosts (of which Facebook would be considered to be one example). To a degree this is explained by Gillespie's (2010) argument about the rhetoric of the 'platform' and the way the phrase allows sites like Facebook to downplay their own liabilities and responsibilities for everything from the illegal to the simply sordid material that circulates through the service. Gillespie (2010: 12) reminds us that 'platform':

... is a valuable and persuasive token in legal environments, positing their service in a familiar metaphoric framework – merely the neutral provision of content, a vehicle for art rather than its producer or patron – where liability should fall to the users themselves.

Instead of an active policing of the material that passes through its servers, and because of this cultural-discursive positioning as a neutral facilitator of content, Facebook can take a reactive approach to policing content on its platform. It relies on user-generated reports via the flagging of particular content, such as comments, statuses and pages. This introduces a certain permissive dynamic to the social regulation of hate speech on the site, a kind of 'quasi-privacy' that lets users in their own semi-private spaces get away with transgressions that might receive social or legal sanction if they did not avoid the notice of other users. One consequence of the reactive approach to regulation of hate speech on Facebook is it becomes possible and even likely that concerned users fail to notify Facebook of instances of hate speech in time to prevent its intended recipients seeing it. Indeed, the burden of 'reporting' instances of hate speech to some extent presumes that recipients will see it (and then report it). In my conversations with some of the flarf activists I observed on Facebook it is clear that many users do not even bother to report hate speech to begin with, particularly given that until recently Facebook's implementation of its community standards policy was notably unpredictable and highly permissive when faced with the issue of public hate speech online.

One needs only to recall the numerous hate speech promoting pages that existed on the site with the tag 'controversial humour' to note this lax enforcement at work. For instance, the Facebook page 'Aboriginal memes,' which garnered a great deal of public attention in August of 2012 in the Australian media, following a series of grassroots campaigns organised to put pressure on Facebook to close down the page – including two separate online petitions that attracted several thousand signatures (Oboler, 2012: 10). The page itself, which posted image macros (photos with captions) that played upon some of the worst racial stereotypes of indigenous Australians was reported by many Facebook users, with the Australian Online Hate Prevention Institute documenting in their 2012 report on the page their own attempts to have the page removed. Facebook subsequently declined to deactivate the page, merely prepending the warning phrase "[controversial humour]" to the page's name, a practice that it employed across the site with numerous "controversial" sites that promoted and propagated hate speech against various groups. The Australian based Online Hate Prevention Institute's report described the decision as 'creating an attitude where people feel racism is acceptable.' (Oboler, 2012: 56) The report's author takes a markedly different approach to the 'neutral platform' discourse, noting that 'Facebook is not a neutral player, but is actively promoting this shift based on their "Facebook Principles." (Oboler, 2012: 56) This is a sentiment clearly at odds with the site's positioning of itself, as having little or no responsibility for the content on it. The Australian Human Rights Commissioner met several times with the company about the site, and it was further referred to the Australian Communications and Media Authority. (Oboler, 2012: 10, 58) The Aboriginal Memes page was eventually taken down, but only after the threat of state intervention and regulation became apparent.

In response to this and the many other instances of lax and uneven enforcement of Facebook's own community standards, in May of 2013 a coalition of groups, led by the 'Women, Action and the Media' activist group, the Everyday Sexism project, and more than 100 affiliated women's and activist groups, petitioned Facebook 'to take concrete, effective action to end gender-based hate speech on its site.' (Women, Action and the Media, 2013) Their actions were in response particularly to a long string of incidences and the widespread perception that Facebook did not treat hate speech directed at women as seriously as other forms of hate speech, for instance, anti-Semitism and racism. Journalist Dara Kerr (2013), reporting on the action, highlights the extremity of some of the content that would often be reviewed and, without the looming threat of state intervention or regulation, would not removed from Facebook instead receiving the "controversial humour" tag, despite being in clear breach of the site's standards. Kerr (2013) notes that:

... several Facebook pages have popped up that encourage or make a joke of violence against women, pages like Fly Kicking Sluts in the Uterus, Violently Raping Your Friend Just for Laughs, and Raping your Girlfriend.

The Women, Action and the Media petition which was sent to advertisers to notify them that their advertisements were running alongside such objectionable material was a modest success, with the coalition of groups managing to raise awareness of Facebook's permissive acceptance of hate speech directed at women with both the public and, perhaps just as importantly, with several major advertisers on the site (Kerr, 2013). Facebook's response to the petition, and the growing pressure it faced to address the issue, came in the form of a statement from Marne Levine (2013), VP of global public policy at the site. Crucially she acknowledges Facebook's failures in enforcement, specifically -

In recent days, it has become clear that our systems to identify and remove hate speech have failed to work as effectively as we would like, particularly around issues of gender-based hate. In some cases, content is not being removed as quickly as we want. In other cases, content that should be removed has not been or has been evaluated using outdated criteria.

As a result, many fewer pages on Facebook exist with the 'controversial humour' tag and the result has been fewer visible instances of public hate speech on the platform since. However this is only true for pages and groups, the more public and visible spaces of the site, and the same cannot be said for individual comments expressing hate speech, the reporting processes for which remain largely confined to hiding the content from the sight of those objecting to it. An important notice at the very bottom of Facebook's community standards page reminds users that:

... it's possible that something could be disagreeable or disturbing to you without meeting the criteria for being removed or blocked. For this reason, we also offer personal controls over what you see, such as the ability to hide or quietly cut ties with people, Pages, or applications that offend you.

Facebook's regulatory environment, then, still has significant gaps and weaknesses in its approach to preventing and addressing hate speech, continuing in places to defer responsibility for hate speech to individual users via 'personal controls.' Despite the success in ensuring Facebook more actively addresses some of the more public components of the site like the offensive pages, the fundamental structure remains one of non-intervention by the site at the level of individual user speech, and the deferment of responsibility to individuals "offended" by hate speech remains in place. User driven practices like Facebook flarf may contribute to addressing the remaining gaps that allow for hate speech in these other areas of the site that are less able to attract the kind of mainstream attention required to instigate significant structural change. Users can contribute, as we saw earlier, in practical ways, such as by drowning out and making hate speech less visible, and by saving the emotional energy of those who would engage in counter speech. They can also contribute in more discursive or normative ways, contributing to 'taking back the web' as Banks (2010) suggests, through personalisation and discursive activism. Facebook flarf outlines the sense in which a space exists between the competing regulatory regimes of Facebook and state based legislation, a space that leaves significant room for user-led creative responses to online problems like hate speech.

Since its peak in or around late 2012 and early 2013, the amount of flarf has, anecdotally, reduced in the circles where I observed that it was once fairly common. This may be partly attributable to the wearing off of the novelty of the activity, as much as to other changes in Facebook's enforcement of its community standards, following the WAM! Coalition and others' efforts to confront Facebook and force it to take greater responsibility for the public hate speech promulgated on its platform. The WAM! Coalition group's success in attaining Facebook's redoubled commitment to enforce its own community standards via regulation may have also contributed to the reduced need for Facebook flarf, since reporting public pages that promote hate speech through Facebook's reporting tools should (in theory) now prove more effective. This is in spite of Facebook's largely deferential approach to individual utterances of hate speech (in comment threads in particular) which it remains difficult to flag and report, relying largely on "personal controls" that do little to change what is visible to the public.

This discussion serves to underscore the negotiated space in which Facebook flarf and other individual responses to hate speech exist, and the limited avenues that are available to restrict and supress hate speech within the larger regulatory regimes of both the platform itself and state based legislations. There are significant costs involved with deploying flarf individually and in small communities, in terms of the time and effort it takes to supress hate speech, further reinforcing the importance of larger scale interventions, public pressure and state level responses, as both Levin (2010) and Banks (2010) have argued.

Conclusion

This paper has aimed to inform our understanding of the problem of hate speech online and the unique constraints and opportunities for intervention by individual users on Facebook, principally via a small case study of the creative activist practice of Facebook flarf. I began by discussing the broad international context that hate speech occurs within, highlighting difference between United States and European comfort with the regulation of hate speech and questions around state intervention. Just as important as these historical and cultural differences, however, are practical issues with online hate speech interventions, with governments and state agencies often unwilling or unable to regulate online hate speech, and with intermediary web services like social media similarly reluctant. Intermediary services like Facebook and Twitter have often sought to position themselves as a 'neutral platform' the better to avoid liability for the material that passes through their services.

Into this context I placed flarf, beginning with a history of the practice in found-text poetry and the way in which it came to be reconfigured and repurposed to employ the Facebook tagging algorithm. I then elaborated the specific utility I saw in Facebook flarf activism as observed during its peak in 2012, arguing that Facebook flarf presents a useful case study for theories of regulating and responding to hate speech online. I argued that Facebook flarf has some ability to drown out hate speech practically and aesthetically, but perhaps more importantly it can serve to communicate social opprobrium and community limits on acceptable discourse online. Facebook flarf represents an encouraging attempt by users to 'take responsibility' for online hate speech and online culture in the spaces they frequent, through personalisation and the performance of an expertise within the platforms affordances. It also communicates a meta-textual and reflexive awareness of the medium of communication itself. I situated the practice of Facebook flarfing for activist ends within a contemporary context of ubiquitous memes and the uncertainty around the sincerity of online comments and discourse, viewing flarf as an example of discursive activism that

repurposes the tropes and practices of troll culture.

Yet despite all this, flarf for all its promise remains constrained in a number of significant ways by the larger Facebook regulatory context, with important structural features that preclude individual user responses on their own constituting a satisfactory response to hate speech on the platform. Specifically, when compared to the effects of public and advertiser pressure on Facebook to better implement and enforce its own community standards policies in public spaces, flarfing seems inadequate to this particular type of problem. And yet, even after significantly improving how Facebook enforces its community standards policy, gaps in Facebook's regulatory regime leave responsibility for reporting and responding to individual hate speech utterances up to users.

The space between these constraints and the possible utility in employing user-led strategies like Facebook flarf leads me to affirm the perspective that finds that, in Banks (2010: 234) words, 'a broad coalition of government, business and citizenry is likely to be most effective in reducing the harm caused by hate speech.' How activists, researchers and users of social media sites can realise a more effective coalition of responses to hate speech lies beyond the scope of this paper, but if Facebook flarf is any indication, there will likely remain a role in any larger regulatory framework for the responsible actions of individual users and communities to challenge hate speech, enforcing the standards they wish to see online.

Biographical Note

Benjamin Abraham is a PhD candidate at the University of Western Sydney, researching network cultures, the philosophy of non-human objects, and digital games. He has published on the internet activist technique of 'Fedora Shaming as Discursive Activism' (2013) as well as on internet communities of video game critics. His current research project is on video game depictions of climate change.

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FCJ-171 Expectations denied: Fan and industry conflict around the localisation of the Japanese video game Yakuza 3

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Abstract:

Online fan cultures provides researchers with a space to observe and analyse the development and establishment of fan participation with media properties. The visibility of, and zealous postings by, fans on online forums offers a valuable opportunity to explore what happens when fans feel their expectations are being denied or limited by creator or industry actions. This article examines the fallout around the localisation of the Japanese video game Yakuza 3 into the West in 2010.

Introduction

As various scholars (Jenkins, 2006a; Ito, 2007; Gray, 2010) have shown, fans can derive creative and emotional pleasure out of the 'world building' occurring in complex media franchises like *Pirates of the Caribbean* (Jenkins, 2007), and *Star Wars* (Brooker, 2002). Media industries are also increasingly valuing the contributions fans are making to these large media franchises. As Joshua Green and Henry Jenkins (2009: 213) have pointed out, 'fans

have been redefined as the drivers of wealth production within the new digital economy: their engagement and participation is actively being pursued.' As this research has shown, although audiences engage deeply and passionately with these large fictional worlds there is a growing expectation among fans that they will have some freedom to use and access this content in a way which best suits them. Within this context, online fan cultures have provided researchers with a 'consistently vocal and conspicuous' (Whiteman, 2009: 391) space to observe and analyse the development and establishment of fan participation with media properties (Bailey, 2002; Bury, 2005; Dutton, Consalvo, and Harper, 2011). As this article will show, the visibility of, and zealous postings by, fans on online forums offers a valuable opportunity to explore what happens when fans feel their expectations are being denied or limited by creator or industry actions.

This article examines the fallout around the localisation of the Japanese video game Yakuza 3 into the West in 2010. The well-known multinational video game company Sega, which has its main headquarters in Tokyo, developed the Yakuza video game franchise. In addition to the Yakuza series it is responsible for such popular titles as Sonic the Hedgehog, Virtua Fighter, Phantasy Star and Total War. While Sega has a long history of developing and publishing video game software and hardware unfortunate financial difficulties culminating in the poor sales of its Dreamcast console in the late 1990s led to the company abandoning its console manufacturing to become a third party game developer. Since being acquired by the Sammy Corporation in 2004 Sega has regained its momentum and enjoys strong domestic sales in its native Japanese market as well as success in expanding into western markets through collaborating with a number of western video game studios and localising games such as the Yakuza series. This article focusses firstly on the attempt of Sega to appeal to a western audience through localizing the Yakuza series.

To understand the conflicting expectations of industry and fans I will examine the fans participation on Sega's official online forum for the *Yakuza* series. This forum makes visible the competing agendas and assumptions held by fans and industry with regard to the localisation process, along with what it means to be a fan during a period of anxiety around a favourite media property. By looking at posts made to the *Yakuza* forum this article also explores the identifications adopted by fans as the future of the *Yakuza* series was thrown into doubt. By analysing the way fans shaped the discourse around *Yakuza* 3 this article will contribute to further understanding the dual role of digital media users as both producers and consumers of media content (Bruns, 2008) as well as contributing to the academic research around fan culture practices during the transition from a broadcast to Web 2.0 media environment (Jenkins, 2006a; Baym and Burnett, 2009; Brooker, 2002; Gray, 2010).

Based on the work of Thompson (1971), Green and Jenkins (2009) develop the concept of the 'moral economy' of Web 2.0 (to explain how media downloaders and remixers justify their actions as appropriate and valuable). Green and Jenkins argue that the relationship between industry and audience is shaped through a moral economy composed of 'social expectations, emotional investments, and cultural transactions that create a shared understanding between all participants within an economic exchange' (Green and Jenkins, 2009: 214). So, for example, rather than focusing on the illegality of fans downloading and appropriating media content, Green and Jenkins explore how these acts can actually assist media content to attain higher visibility and popularity. It is this moral economy dynamic and the way in which it has shaped relations between *Yakuza 3* gamers and Sega that is the second focus of this article.

Trust

For Austin et al. (2006) the loss of trust between stakeholders is a key factor in cases where moral economy concerns emerge. Concerns around trust can be triggered when 'a rights-holder makes a choice that affects their audience's enjoyment of or ability to use or access their content, they gain or lose legitimacy—and with it, the audience's trust' (Austin et al., 2006: 12). Changes around access and use of content can be seen in industry concern about widespread copyright violation and mistrust of audience use of technology, as well as concerns about industry exploitation of fan labour, and a general loss of faith in business to act with the best interest of consumers in mind (Edelman, 2012). In response, Austin et al. (2006) argue for the need to recognise the claims for moral legitimacy that are occurring on both sides of the debate. In particular, Austin et al. (2006) suggest an alternative approach to the problem involved, based around engagement and participation with audiences, rather than criminalising and policing a user base.

The issue of trust was a concern for Sega leading up to the localisation of *Yakuza 3*, as the following interview with Sega Australia's managing director Darren Macbeth reveals:

Feedback from our fans online has suggested that there are more than a few gamers out there that are looking forward to a local Yakuza 3 release. ... We are listening to this feedback. However, releasing Japanese titles in the West is a tricky beast. In a lot of cases we have a very strong vocal group of fans, who demand the opportunity to play these games in their local markets and are very outspoken in their support. However, when the time comes, they are reluctant to stay committed and actually make the purchase. For this reason,

although taking consumer feedback into consideration is important, we really need to analyse the market and competitive landscape to determine for ourselves if localization of Japanese games is indeed warranted. (in Parker, 2009)

For Sega, while fans were vocal in their desire for *Yakuza 3*, this energy did not translate into what matters in the market - strong sales figures. There were also members of the fan community who wanted *Yakuza 3* to succeed commercially. In what I am about to describe, both Sega and some fans were attempting to achieve the outcome they want while not harming the commercial viability of *Yakuza 3*. On the one hand Sega needed to localise *Yakuza 3* by removing content while avoiding the risk of disenchanting their core fan base through these localisation choices. On the other hand fans wanted to make their displeasure known while avoiding the risk of driving down sales and undermining the possibility of future *Yakuza* game releases in the West.

In discussing moral economy, my concern in this article is to further understand the different agendas and expectations that were driving the debate around the localisation of *Yakuza* 3. By examining the' *Yakuza* forum through moral economy I will show that fans adopted a range of identities as part of an ongoing debate around who was acting in the best interests of the video game franchise.

The need for both audience and industry to reconsider and renegotiate the relationship between audience and industry is an ongoing one, but in the case of *Yakuza 3*'s localisation it is one in which industry was increasingly being forced to realise the importance of listening and responding to fan concerns. As Green and Jenkins (2009: 214) argue:

... media companies are being forced to reassess the nature of consumer engagement and the value of audience participation in response to a shifting media environment characterized by... the increased power and capacity of consumers to shape the flow and reception of media content.

This article brings together three different ideas to help frame the discussion around fan/industry relationships: moral economy (Green and Jenkins, 2009), trust (Austin et al, 2006) and identity (Whiteman, 2009). To broadly contextualise these three positions: moral economy reveals the agendas operating within fan communities as they download and repurpose content from major franchise and media properties. The question of trust is an extension of this discussion – ultimately it is the glue that holds a moral economy together.

Identity, in this case, centres on how the fans view themselves relative to the media property in question, to the company that created the media property, and to other fans.

The Yakuza online forum

Although Sega's official forum for the Yakuza series isn't the archetypal, fan-produced, 'by fans for fans' website, there are three reasons that make it a significant and relevant focus for this study. First it has over 2000 members making it the largest online forum for the Yakuza franchise. Second, the discussion topics are broad and range from advice on how to win the game to criticisisms of the games industry. Within this range of topics expression is free and open. This is not a space that simply reinforces a pro-Sega perspective. Indeed, this is one of the surprising ironies of this campaign to challenge Sega's localisation of Yakuza 3 - it was organised and discussed on the very forum Sega created to promote their properties. Third, the forum is also elaborately set up to allow for a deeper experience of Sega's other video games. Consequently, there are various comments on the forum that reflect not only Yakuza fan opinion but also the broader location of Yakuza within Sega's other properties and video gaming in general. As I will show, these three aspects afford insights into why Yakuza 3's localisation became a significant issue in industry-consumer relations for Sega. In a larger sense, this case also helps to further understand the storytelling function of forums to entrench particular narratives of a company's success and failure within the gaming community.

The focus of this article is one particular discussion thread started in March 2010 with the title 'Full list of cut content'. [1] As of April 2012 this thread had 151 posts and over 14,000 views, making it the most viewed thread within the *Yakuza* message board. Within this thread gamers compiled a list of what had been cut from *Yakuza* 3 and expressed their concerns over the localisation process and what this meant for their experience of the game. In this article, I will argue that the conversations which emerged on this forum reveal the discursive strategies used by Western gamers to negotiate what it means to be a gamer and fan of this Japanese video game series during a time of uncertainty around the sustainability of localising it into the West. Additionally, these conversations reveal the broader expectations fans have concerning their rights as media users. As I will show, these fans used the discussion forum as a way to negotiate conflicting feelings of powerlessness over the decision making process and a moral righteousness around what they felt was best for the series. These twin feelings of powerlessness and righteousness were expressed in ways that were both collaborative with, and oppositional to, their view of Seqa's market-driven concerns.

My analysis of those who posted messages to the *Yakuza 3* forum will focus on two core identities: firstly, those who drew on specific video game practices; and secondly, those who drew upon forms of new media practice such as modding, fan-subtitling, parallel importing via online stores, and digital downloading to get the game in the form they wanted. These identities will show that gamers bring with them a set of expectations around participating in complex, open world [2] video game franchises. While gamers recognise the financial and commercial pressures that often determine the outcome of the localisation process, they also hold an expectation that industry will recognise the emotional and identity-based investments they have in their favourite video game properties.

The Yakuza Video Game Series

Yakuza 3, or as it is known in Japan Ryū ga Gotoku (Like a Dragon), is a video game series based on the violent and corrupt crime world of the Japanese yakuza. In the game you play as Kazuma Kiryu as he rises and falls within the yakuza hierarchy and delivers 'street justice' to a series of villains and corrupt politicians. The Yakuza video game series was launched in 2005 for the PlayStation 2 game console and has so far spawned six spin-off titles. Three of these were direct sequels that continued the main narrative, with the other three being spin-off titles that expand the Yakuza world through new characters and settings such as Kazuma's ancestor in feudal Japan. The series has become one of the most successful video game franchises in Japan and has received a number of industry awards which have praised its story and gameplay (Computer Entertainment Supplier's Association and Ministry of Economy Trade and Industry, 2009). The popularity of these games has led to a live action movie adaptation as well as a radio drama series, a web TV series, a magazine series based on the games' hostess characters, and a supermarket full of related merchandise. [3] The spread of Yakuza 's narrative across multiple media platforms mark it as one of the larger adult-oriented transmedia efforts to come from the Japanese video games industry.

In the West, the *Yakuza* series has received positive critical and fan reactions. While sales have been modest most of the series has been localised. [4] Much of the praise for the series has focused on the game's combination of 'open-world' adventuring with a central storyline of loyalty and revenge, all set against a highly detailed and immersive Japanese location. Fans and the gaming press have drawn comparisons with popular Western open-world games such as *Mass Effect* and the *Grand Theft Auto* series. But these comparisons are always made in the context of *Yakuza* being a uniquely Japanese game involving sub-missions and mini-games which are quirky, such as dating hostesses, and

traditional, such as playing Shogi (Japanese chess). This is a foreignness emphasised in this teaser for *Yakuza 3* on the video game news site Kotaku:

Gamers don't often get a chance to play the equivalent of a foreign film, a work that is intentionally left in its native tongue and tone. In March, on the PS3, with Yakuza 3, they can, trying a game that offers a distinct mix of brutality, novelty and almost-real-world grit. (Totilo, 2009)

Yakuza 3 was released in Japan in 2009 and a year later in the West. However, leading up to its launch concern had been growing in fan community and video game news sites that the amount of content cut from the game was larger than first expected. Responding to this growing concern a number of spokespeople from Sega attempted to curb the potential fallout by explaining the difficult choices the localisation team faced. On the Sega America forum, Sega's Assistant Community Manager Ruby Eclipse (2010b) explained

Ultimately, the choice that had to be made was either no Yakuza 3 in the west, or a version of the game that was almost exactly the same, but with a little less trivia. That said, our teams also understand that many of you guys love games like Yakuza because of that experience, and rest assured that we'll continue fighting on your behalf to make sure that going forward, we can provide as close to the full experience as possible – no matter how foreign.

However, concerns around the cuts and resulting gamer backlash frame games journalist Totilo's (2010) article for the Kotaku website which speculated on whether cuts would make or break the future of the series in the West:

Fans of the Yakuza series in the West have criticized Sega for dubbing the original game in the series and lauded the company's apparent shift with the subtitled Yakuza 3 to a more authentic-to-Japan approach. Online, fans appear to be angry. Whether this decision affects whether the game can sell big will be seen next month when Yakuza 3 is finally released in the U.S.

While these grim speculations on the *Yakuza* franchise's end were not fulfilled and further *Yakuza* titles have been localised since *Yakuza* 3, the negative gamer reaction to *Yakuza* 3 's localisation has made a lasting impact on the story being told of this franchise by the gaming press, fans and creators. This impact can be seen in the interview *Yakuza* producer

Masayoshi Kikuchi gave to the video game news website Digital Spy (Reynolds, 2010):

At the time there was an argument with Sega internally that in order to make the game more compatible and appealing to the Western market, we would do better off removing those mini-games that are hard to understand and heavily rooted in Japanese culture. We did what we thought would be good for the Western market, but after the game was released we received a lot of feedback from users in the complete opposite direction, asking for complete content. Learning from that experience this time, we've tried to include all content in the Japanese version you see in [Yakuza 4].

In the interview Kikuchi reveals that the decision to remove content from Yakuza 3 was done in the hope it would make the game more appealing to a Western audience. He goes on to express his surprise at receiving such an assertive Western fan campaign to restore Yakuza 3 to it's complete state: 'It was a big surprise for us. I'm definitely pleased that people wanted to see more, but at the same time, I feel sorry for the fans who were let down by the cut content' (in Reynolds, 2010).

As I will show, a range of anxieties and opinions were voiced on the Sega forums. These included fears that these cuts had removed important narrative and game play experiences, to concerns that companies like Sega had lost touch with their fan base.

In discussing these issues on the Yakuza forum, posters framed many of their concerns around moral economy type positions. In these posts, moral economy concerns specifically that the fan community had the best interest of the game in mind rather than Sega – were linked to three particular video game practices: interactivity, immersiveness and intertextuality.

Interactivity and narrative

Jansz and Martens (2005) point out that interactivity is considered to be one of the core elements of game play. Players feel more immersed in the game world through interacting with objects and the environment of the game. Studies such as the Nielsen Interactive Entertainment research report (2005: 14) have pointed out that the opportunity for gamers to escape into a fantasy world and use their imagination is one of the main reasons people play video games. On the forum, being a gamer in *Yakuza 3* was aligned with interacting with the game world, in particular being able to complete the game. Thus the enjoyment posters expressed in collecting and using various items in the game to unlock the entire story and earn perks and achievements.

In the following post, for example, we see how the removal of the hostess clubs from the localised version impacted on the gaming experience:

The problem is they cut host clubs, but almost every character refers to host clubs, about 40% of all items are related to Host Clubs, 2 story missions take place in host clubs, some substories are related to host clubs, there are places that promote host clubs (now they promote 1 bar or something which looks RETARDED because these places are full of GIRL PHOTOS, see, not bar or bottle photos). It's ***ging ridiculous. They could cut darts or bowling, all right, but without host clubs overall experience feels mangled! If you deny it - you haven't played the game. WTF I should do with all those that make Kaz more appealing for ladies? And all the gift items?

To provide some background on these cuts, in the original Japanese game your character uses various items to romance hostesses and unlock a side-story where you groom a young girl to become the top hostess. While the Western version kept some of these encounters, they were moved from the hostess club to a hamburger restaurant and the side-story of grooming a hostess agency was removed. For this gamer, the absence of hostess clubs from the localised version sent ripples through the entire fabric of the game. While you could still collect various objects while playing the game, those that had been designed to win the affection of hostesses no longer had any use.

The interactive moments of the *Yakuza 3* game are presented by this poster as requiring players to be part of the flow of story across various locations and encounters with characters. By emphasising the disconnect between the main story, sub-stories and item-collecting this poster reveals the 'mangling' of interactivity which they felt had occurred in the localisation of *Yakuza 3*. Interactivity, for this gamer, involved meaningfully combining game content in a fluid, inter-connected environment. This emphasis on meaningful interaction defines the gamer as an emotionally invested participant in the world building of the game. While those who dismissed these cuts as being unimportant were portrayed as not having fully experienced the game. As one poster remarked: 'If you deny it - you haven't played the game'. Similar concerns around the loss of interactive game play due to the removal of the hostess clubs are seen here:

Host Clubs are THE CORE of ALL TRIVIA in game. But cutting them SEGA pretty much ruined the game. I'm at Chapter 12 now and it's just disturbing and disappointing. They ****ing cut the ONLY thing that cannot be cut! The only thing that is related to everything including the main story!

The damage of Sega's cuts to Yakuza 3 is presented here as undermining the foundations upon which the game's main story is built. Instead of removing content that is of little direct importance to the game, the poster here argues that the removal of the Host Clubs has removed 'THE CORE of ALL TRIVIA in game'. Again, the interlocking foundation of missions and collectibles that support the main story had been seen to be lost.

This emphasis by gamers on defining themselves through the in-game actions of exploring and overcoming challenges is similar to Whiteman's (2009) findings about Silent Hill gamers who defined themselves 'as players of a game that required sophistication, focus and expertise' (Whiteman, 2009: 399). In Whiteman's study these claims positioned the gamer as more active than the passive audience for the live-action movie adaptation. Within the Yakuza claiming a deeper and more complete experience of the game was used to challenge those who felt the cut content was peripheral and unimportant. In the case of the Yakuza players, being able to play and beat the entire Yakuza game was seen as dependent upon the gamer interacting with missions, collectibles, and mini-games. The absence of any one part, even small elements caused posters to feel that the game was incomplete and the pleasure of beating all parts of the game was unsatisfying.

Immersion and marginal content

The framing of Yakuza 3 as an immersive experience was fuelled by Sega's own promotion of the game. On their official website Sega proclaims: 'the epic feel of exploration, and Japanese culture, that the game offers are things you won't find anywhere else' (RubyEclipse, 2010a). Sega promised a 'real-world immersion' where gamers would:

... discover the authentic, sandy beaches of Okinawa or travel to the neon-lit adult playgrounds of Tokyo. Become a regular at nightclubs, restaurants and real-world stores to uncover hidden truths and gain access to side missions (2010).

Fans on the forums who felt their experience of the edited, localised form had not lived up to the publicity's hype later quoted these claims.

The concern that these cuts would disrupt the depth of interaction offered in the game was a central concern on the forum. While the cuts were seen to have a clear impact on the game's storyline, for others the main concern was the impact the cuts had on the game's immersiveness, in particular if these cuts restricted the freedom to explore an open-world environment. These latter concerns did not revolve around the loss of missions like the hostess club, but instead focused on losing smaller, marginal aspects of interacting with the *Yakuza* world. Consider, for example, the following post that raised one of the more marginal cuts that had been made – browsing the content of magazines at convenience stores.

It seems insignificant to want to browse the magazine, but the thing is, like Mass Effect 2, this game is all about immersion and it's the little things that all add up to make you feel like your really in this world. When you look at the mags but can't read them, for me, I felt a bit like I was pulled out of the world... when I found out the Japanese game lets you browse the mags, it would just add to the overall atmosphere of the game and would have kept me in the world at that moment in time.

By drawing a comparison to *Mass Effect* – a game that allows the player to experience a deep and layered role-playing space – this poster is highlighting an awareness of being 'pulled out of the world' because parts of the game have been removed. What is stressed here is the value and worth of being immersed in this world and how even small cuts can threaten the game-world's integrity. For this fan the game unfolds as a complex, interwoven set of missions and discoveries.

While the poster acknowledges that some of these encounters may seem marginal and unimportant to the overall game, nevertheless the lack of them – such as browsing magazines in the convenience store – are seen as undermining the foundations of the game's open-world experience. Here we see an emphasis on the peripheral as being central. It underpins the gamer's ability to immerse themselves fully within the virtual world of the game. This reprioritising of the marginal over the core experience is something theorised in Gray's (2010) idea of the 'paratext', in which the parts of a media franchise that are traditionally seen to be tangential spin-offs, such as movie posters, video games, and toys, become instead the central meaning-making space for a fan. A similar revaluing of the in-game *Yakuza* collectibles and paraphernalia is occurring here. For some gamers,

experiencing the marginal in-game content, like browsing a magazine, is central to their pleasure. It is through these peripheral encounters that posters tell a story of themselves as a skilled gamer immersed in a virtual world. In short, the cut content, trivia and marginalia may be peripheral to the main story, but *not* the interactivity. In this regard, *Yakuza* may not be the type of open world game where the mini-games and side-missions always mesh with the main story in the way they do in other open world games such as *Red Dead Redemption*. Yet *Yakuza 3* invites players to take pleasure in world building across high and low levels of intensity and risk while still keeping the gameplay systems intact.

Engaging in the world of *Yakuza* involves experiencing a cumulative immersion in which the synergy between peripheral content, core content and gamer participation results in an immersive gameplay for the gamer. For these gamers, *Yakuza* is a cumulative experience where the sum of its parts is greater than the whole, and as a result of the cuts in the Western version, the game had lost its potential for deep and rich world building.

Intertextuality and pop-cosmopolitanism

As the above discussion reveals, concerns around the loss of interactive and immersive experiences were also related to broader, intertexual and genre expectations gamers had developed through playing similar types of 'open-world' role-playing games. As I have shown above, removing side-missions and mini-games removed the skills and practices that gamers had used to complete similar games in the past. That is, gamers located *Yakuza 3* within a collection of other games that offered similar open world, role-playing experiences such as the *Grand Theft Auto* and *Mass Effect*. In most cases comparisons to other series were used to show the qualities they felt had been undermined through the cuts. This was evident in the comment described earlier in which a poster stated that they wanted *Yakuza 3* to remain closer to other games such as *Mass Effect* which allowed players to go deeply into that world through interacting with banal or incidental objects. There were also concerns that by removing content that was deemed unfamiliar to a Western audience Sega was depriving Western gamers of the opportunity to experience a unique Japanese approach to the open world genre of games, as revealed in the following comment:

The Yakuza series is like a foreign film, and it has to be left that way. You can tell they have no clue because they even changed the Japanese song in the title. The western audience loves the Japanese quirkiness. ... It is one reason why Japanese Anime has exploded in the west over the last decade.

Here we find an example of the type of 'pop-cosmopolitan' practices that Jenkins (2006b) has suggested emerged through the global popularity of popular culture like Japanese anime or Indian Bollywood films. Developing a new cultural literacy through enjoying foreign media forms is seen here as an enriching, if somewhat skewed, awareness of difference. As an ideal, enjoying and understanding foreign media becomes an act of connoisseurship and mastery. While these moves raise questions around the actual authenticity or deeper cultural sensitivity those claiming mastery over these forms have (Napier, 2001), nevertheless such moves challenge the market-oriented, business decisions to remove this content because it would turn an audience off.

As I have shown in this section, gamers emphasised the immersive, interactive and intertextual experience of the *Yakuza* game to frame how their exploring and role-playing skills were being constrained by the cuts to the localised version. By contrasting the original game to the localised version they argued that these cuts caused narrative discontinuities that threatened the overall coherency and enjoyment of the game. The gamers' emphasis on exploration and play within a dynamic virtual world was used to define their identity as the core audience for this game, an identity that knew what was best for the game.

While the denial of these game-play expectations and emotional investments revealed the basis of the moral economy posters were bringing to the discussion, nevertheless there were those who challenged the significance of these cuts. These posters argued that the cuts were minor and did not restrict anyone from experiencing *Yakuza 3*'s main story line. For example, this poster's response to calls to boycott the game calls attention to the strength of the main game:

So, overall, yes, the cuts suck. But really, they are only a small percentage of a massive game. I'm happy with the game as is. Yes, Sega made stupid-cuts with little reason, but I think people boycotting the game because of it are blowing it way out of proportion. The game is still highly enjoyable, and I'd say only about 10 hours of stuff was cut. Yes, that is a lot, but not in a game as massive as Yakuza 3. Be thankful you got the game at all.

Some gamers even saw positives in this localised form, in particular the possibility that the localised version would sell more copies and secure the release of future *Yakuza* titles in the West. Others raised similar sales-oriented concerns around calls to boycott or discourage others from buying the game in the fear that these would drive down sales harming the long-term viability of the franchise in the West. Despite these disagreements – which often challenged the emphasis being placed on marginal or ancillary parts of the

game - these cuts were more often referred to as damaging the game and denying the expectations and skills of core gamers.

The Yakuza game and online culture

In sum, despite calls to 'tone down' and 'put in perspective' the anger towards Sega, the overall emphasis of most posts on the forum thread were aimed at making Sega aware of the damage the removal of this content had done and requesting the missing content be reintroduced back into the game.

As the previous analysis has shown, many of these concerns were framed around a concern that Sega had failed to live up to expectations. However, what made this more than just another example of the pitfalls in localising a Japanese video game into the West was that the localisation of Yakuza 3 coincided with changes to the delivery of, and access to video games. While some posters were concerned with how these cuts undermined and restricted their immersion in the game, other members of the community posted comments on their broader consumption and usage patterns of video games. For these posters Sega's approach to localising Yakuza revealed how out of step the company was with their practices of buying and playing games.

In the following post, for example, we see how the prevalence of online video game stores that sell various regional versions of games has created an awareness of difference. Access to these different versions of games has led to an awareness of how some markets were disadvantaged by poor localisations and deprived of content or services offered to other regions. This is a sentiment revealed in this comment replying to those who argued fans should be thankful that Sega localised Yakuza 3 at all:

'We should not be grateful. It's year 2010, you can buy ANY ****ing game, any version of it! Playasia, Shopto etc. And releasing such a cut version... It's just intolerable'.

Purchasing games online from overseas companies is one way to circumvent edited versions of games or limited local choices. The next post reveals the readiness of fans to directly involve themselves in the production and circulation of media content: 'we need to get a group of people together to fansub this and create a patch for the Japanese version.

That will be the only way to get our content. It might take years though'. And another poster adds:

Hell, I'd be willing to work for Sega for free to release the cut content, I reckon all of the cuts they made to the game are horrible...WTF are hostesses doing in burger joints dressed like that? and what's with the cheesy lines? I could go on and on, but they if they manage to do that, then they can at least manage to change it back, I mean they have the original programming source, right? you get fansub groups who translate loads of anime for free, so I don't see why they just can't spend about a week (or less) translating the rest, if you know what I'm saying.

Posts such as these reveal the expectations some fans have that if a company is going to badly handle the release of media content, then fans will do it themselves. As Jenkins (2006c) and Lee (2011) have argued, the work of fansub groups to translate and circulate anime during the late 1990s is now seen as a significant example of fan piracy leading to the emergence of a strong commercial market for anime in the West. Such posts reveal an acceptance of reworking and accessing content that bypasses traditional, industry controlled means of localisation and distribution. These posts also demonstrate the posters' comfort at seeing themselves as both producers and consumers of their media. Posters present themselves as wanting to use the tools and collective resources of online communities towards the goal of getting the game in the form they and others want it.

Here we find examples of the sorts of 'reconceptualization of the audience' described by Jenkins (2006a) and further developed in Green & Jenkins (2009) where audiences are seen as being media creators through the types of participation with information and culture that have developed online (see also Baldwin, Hienerth, and von Hippel, 2006; Bruns, 2008; Burgess and Green, 2009; Croteau, 2006; Hartley, 2009; Shirky, 2008). In this case, the broader media environment in which these gamers have grown up has created certain expectations about their involvement and participation in the entertainment experience and in terms of getting the content they want in the form and manner they prefer – specifically, for example, the ease of accessing obscure anime through the online fan subtitling networks and the ease of comparing and buying different regional versions of games through online retailers. The essence of the argument is that convergence needs to be understood beyond the bringing together of technologies into one media device. It needs instead to be understood 'as a cultural logic involving an ever more complex interplay across multiple channels of distribution' (Green and Jenkins, 2009: 215). Ultimately, these moves challenge the previous models of controlling content and territorial distribution of product. Instead we have 'consumer demands for media content where, when, and in what form they want it' (Green and Jenkins, 2009: 215).

While this participation benefits fans through offering pathways to becoming a professional, helping identity formation, and accumulating cultural capital, this phenomenon can also be seen as part of the 'free labour' that fans provide to industry. While Gill and Pratt (2008) and Terranova (2000) see this unpaid work of fans underpinning today's information economy, others such as Lee (2011) see the continual fan-translation and distribution work fans do as far more efficient and global than the cultural industry distribution models. Lee (2011) argues the success of fan communities to provide a user base with what they want in the form they want it points to a significant gap between the success of the fan model and the slower, lumbering movements of the cultural industries. These fan practices show how some consumers now directly participate in the circulation and expression of popular culture forms in ways that demand some degree of collaboration with industry and rewards them with some involvement in the circulation and expression of their favourite texts [5] (Banks and Deuze, 2009; Cova and Dalli, 2009; Deuze, 2007).

Downloadable Content

A unique aspect of the *Yakuza 3* case is that it concerns the localising of existing content that was highly successful in another cultural context. This presents a very different set of production issues as opposed to the creation of new original content. The expectations of fans are also quiet different in each case. While fans may appreciate the reluctance of a company to create new content from scratch for a completed game, they will not feel as generous towards a company perceived to be holding back on existing content made available for other markets. When it was announced that content had been cut from the game, some posters expressed their hope that the game could be restored to its full state through a patch or with downloadable content (DLC) seeing that the content had already been produced for the original Japanese version and may even be sitting there somewhere on the Western game version hidden from view. A number of comments were devoted to tracking down possibilities that the content may still be on the disc but locked on the Western version:

I'm just speculating actually. The bars for example are grayed out on the map and the name of the bars also appear when you push the triangle button on the map. With that said, I'm just assuming that the content is still in the game just locked. I know Capcom did this with street fighter 4.The SF4 disk contained costumes that were locked on the disk and later released via DLC.

The idea that the game could be patched or an additional purchase made to buy the 'full' game was controversial because of previous examples, such as *Street Fighter IV*, where content on the game's disc had been locked and required gamers to spend further money to unlock this content. Critics of this practice argue that if consumers have paid for a disc they should be able to access all the content on that disc. This was a concern suggested in the following post:

Even if everything was on the disc (I hope it's not though - knowing all that stuff is just sitting on the disc is just painful) I just don't see them translating it all for us. IF they do, I'm interested in seeing if they charge us for it - they probably will... which will, of course, start another huge uproar.

While most felt it was unlikely that the problem could be as easily fixed as unlocking content or downloading the removed content, nevertheless the new ways content was being provided to gamers led many to ask what new media fixes might be available to resolve this problem.

However, as Austin et al.'s (2006) argue, moral economy concerns also emerge when:

... powerful economic players try to shift from existing practices and towards some new economic regime. As they do so, these players seem to take away 'rights' or rework relationships that were taken for granted by others involved in those transactions. (Austin et al., 2006: 12)

For some gamers, these new methods of delivery fostered concerns that a shift in buying video game content could be used by industry to exploit gamers. While having the content restored via DLC would be welcomed, as the above comment acknowledges it would 'start another huge uproar' in the community around costs and the manner of its delivery. The debate around DLC has two implications. Firstly it reveals the major changes occurring in the relations between media makers and their audience, particularly when the audience is a technically savvy, vocal community who see themselves more in a partnership with content creators than passive consumers. Indeed, there is a current debate among fans on the forum as to whether they should collectively invest in localizing the latest *Yakuza* game through encouraging Sega to crowd fund its production or even buying shares in Sega Sammy Holdings Inc. in order to have more control over the handling of the *Yakuza* game franchise. [6] Secondly, there are implications concerning the way in which cultural capital is transferred from one culture to another. In the case of the *Yakuza* game, while Sega may

have felt there was a need to slightly westernise the game content, many in the fan community demanded that the distinctively Japanese cultural content of the game remain untouched.

Conclusion

The analysis presented in this article has explored the changing relationship between media industries and consumers through the localization of the Japanese video game Yakuza 3 for the western market and the resulting online fan response. To a large degree the concerns and debates raised by this online community of vocal fans over the translation of Yakuza 3 is ultimately an argument about ownership. That is, they are concerned with defining what the Yakuza game is and how it should be translated into the Western market, or more broadly who can participate in the Yakuza phenomenon. By ownership, I'm referring to something beyond legal, proprietary rights; owning something in popular culture also includes 'owning' the debate around how the game makes you feel, what its core elements are, and how it should develop or be handled in the future. In other words, ownership includes moral or cultural custodianship over the media property and what it means. While both Sega and the Yakuza fans share an interest in ensuring the success and popularity of the Yakuza 3 game they differed on the best way to achieve this. This type of conflict is not uncommon, as Green and Jenkins point out, even examples of companies attempting to collaborate with fans inevitably involves 'potential conflicts since fan and corporate interests are never perfectly aligned' (2009: 219). And with fans able to voice concerns and alternatives in online forums it is becoming increasingly common to see public conflict and negotiation between industry and audience when expectations are denied or misled. However, in the case of the debate around Yakuza 3's localisation, the fact that Sega went on to localise a version of Yakuza 4 and Yakuza: Dead Souls with minimal cuts suggests that Sega may be moving towards giving this vocal community of fans the type of Yakuza game they wished Yakuza 3 had been. Clearly a single forum on a company's website does not represent a magical public sphere through which to bridge industry and audience power struggles, but it does at least offer a new way of negotiating and making more transparent questions of media power, cultural politics and economics – moral or otherwise – in relation to modern media creation.

Biographical Note

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Notes

- [1] The full URL for this forum is http://forums.sega.com/showthread. php?322120-Full-list-of-cut-content
- [2] The open world genre of video games refers to those games that allow players to have a large degree of freedom in choosing where their character goes, the actions they perform and the sequence of missions.
- [3] This is literally the case, as merchandise surrounding recent *Yakuza* releases has featured prominently in the Japanese chain store Don Quijote. In an interesting act of cross-promotion Don Quijote stores were also part of the Yakuza game world, appearing as one of the in-game stores players could shop in.
- [4] Only the historically based *Yakuza Kenzan* game and the PlayStation Portable system have not being localised.
- [5] While this was a sentiment expressed on the *Yakuza* forums, it should be noted that a fan-subtitled or patched version of the *Yakuza* 3 game was never made. On the forum many fans cited the difficulties of coding and manipulating data on the PlayStation 3 console. However, there are examples of fans subtitling games such as the Japanese-only release of *Fatal Frame* 4 (*Zero: Tsukihami no Kamen*) for the Nintendo Wii, which received an unofficial English-subtitle patch produced by fans once Nintendo decided not to publish the game in the West.
- [6] For further details see the forum threads *Yakuza 5 crowd funded translation* http://forums.sega.com/showthread.php?515198-Yakuza-5-crowd-funded-translation and *yakuza 5 localization master plan http://forums.sega.com/showthread.php?513437-yakuza-5-localization-master-plan*

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FCJ-172 Posthumanism, Technogenesis, and Digital Technologies: A Conversation with N. Katherine Hayles

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Abstract:

An interview with N. Katherine Hayles by Holger Pötzsch. Hayles discusses the arc of her work, from her book *How We Became Posthuman* to her current exploration of nonconscious cognition. She also discusses technogenesis, the digital humanities and digital technologies more generally, and more recent engagements with objects and the sciences, including the work of object oriented ontology and Karen Barad.

Holger Pötzsch: Katherine Hayles, your idea of posthumanism is inspired by cybernetics and by a new attentiveness to the body and materiality?

N. Katherine Hayles: Posthumanism as I define it in my book *How We Became Posthuman* (1999) was in part about the deconstruction of the liberal humanist subject and the attributes

normally associated with it such as autonomy, free will, self determination and so forth. What I saw happening in the 1980s and 1990s was the rise of a new way of thinking about human beings that was in flat contradiction to all these attributes; that was what I called posthumanism. One of its manifestations was the idea that if you capture the informational patterns of the human brain, you could then upload it to a computer and achieve effective immortality. To me this seemed absolutely wrong, even pernicious, because it plays on mere fantasies of cognition and of what constitutes human life. I was, at this point, very concerned to insert embodiment back into the equation. It seemed significant to me that the foremost proponents of this reductionist view of human life, such as Hans Moravec, were not neuroscientists or physiologists, but worked within robotics. As much as the science of robotics has advanced, it still is no way near the capacity to reconstruct the complexity of the human brain and its relation to the body and its surroundings. The embodied nature of human cognition is highly relevant to the question of whether downloading a human personality might ever be possible. In my view the answer to this is no. Certainly it will not be possible within the next 50 years.

HP: But you think it might be technologically possible in a remote future?

KH: We currently have no computational platform that approaches the complexity of the human neurosystem; neural nets, for example, model synaptic connections but lack any connection to the complexities of the endocrine system and hormonal regulation. And even if we had such a device, the questions of the embodied nature of cognition and varying relations enabled by the sensory system still remain unanswered. Humans are enormously complex systems and we have nothing like that in regard to technological systems.

HP: Isn't it quite reductive to assume that the question of copying a human being onto a hard drive is merely a question of complexity?

KH: Complexity and embodiment together. To say uploading is unlikely is not to deny, however, that computational media and other advanced technologies are changing the conditions of human life. Ray Kurzweil, for example, interrogates the various ways through which technology is already affecting things like life-span, human cognition, sensory systems, and so forth. We cannot draw a clear ontological distinction between human beings and their technical surroundings.

HP: What about the question of politics and agency in this?

KH: Once one starts to focus on how technology enables, for instance, longevity, one immediately becomes aware of the resource question. Simply compare the amount of money spent on life-enhancing and –prolonging technologies in the US or Western Europe with sub-Saharan Africa. The varying relations between humans and technology are always already invested with politics. Life expectancy and resource allocation are directly related. The problem is never merely technological, but always also social, political, and economic.

HP: If the liberal humanist subject is deconstructed, can we still account for creativity and change?

KH: Why would this deconstruction impede change, creativity, or as others have claimed progress? Can we assume 1) that human beings actually can be isolated from their technological or other contexts, and 2) that humans are the only agents capable of complex cognitive operations? I do not think we can. On the other hand, posthumanist thinking might help us to take a new look at the boundaries between what counts as human, animal, machine, or object. A redrawing of this boundary certainly entails highly political questions that can point either toward an inclusive and progressive, or an exclusory, direction.

HP: How does posthumanism change received ideas of agency?

KH: In the version of the human articulated within the liberal-humanist tradition, agency is seen to reside primarily in the individual subject. Individuals can be incorporated into larger structures, but it is ultimately the individual that possesses agency. As we move deeper into a highly technological regime and as the technological infrastructure surrounding us becomes more and more complex, it becomes increasingly obvious that human agency cannot ever be seen in isolation from the systems with which humans are in constant and constitutive interaction. In fact, the idea that human agency is paramount appears to be an illusion; as Bruno Latour and others have pointed out, it is a good corrective to see agency as distributed among both human and non-human entities. This is a primary focus of the emerging field of new materialism that looks into how technological, and also biological and social, processes predispose and channel human action.

HP: Have we ever been anything but posthuman?

KH: Thinkers such as Gilbert Simondon and later Bernard Stiegler have alerted us to the fact that humans have always been integrated into their environment and have co-evolved with it. What is new at the present moment is the unprecedented degree with which we actively build and change these environments. This enables new feedback loops and new forms of amplification between human evolution and technical developments. Take for example human attention. Humans are equipped with two mechanisms of attention: deep and hyper attention. Deep attention has a high threshold for boredom and enables one to engage in a specific task or problem over an extended period time to develop expert knowledge; hyper attention requires constant gratification yet enables one quickly to scan significant amounts of data to gain an overview or identify certain patterns. Both forms of attention have been with us since the beginning of humankind, and both have specific advantages. Now, with the development of ubiquitously networked digital devices, however, we have created a socio-technical environment that systemically privileges hyper attention. This has profound effects on human cognition and stimulates the development of hyper attention. Humans with this ontogenetic adaptation actively reconfigure their technical environments in a direction that requires even more hyper attentiveness. The biological, technical, and socio-cultural implications of smart phones are a good example of the mutual amplification of technical devices and human social and neurological co-evolution. This is something I try to get at with the term "technogenesis" in my book How We Think.

HP: Can you describe the particular role of digital technologies in contemporary technogenesis?

KH: Obviously, digital technologies have vastly expanded our ability to communicate, to do research, gather information, share, organise, and so on. Digital technologies have brought the technological infrastructure that I have been talking about to an entirely new level. The interfaces connecting humans to their technical surroundings become more and more transparent, while the networks connecting us become more and more ubiquitous. This has profound embodied, and also socio-political and economic, consequences. The global banking system, for instance, is more interconnected today than ever before. This provides increased efficiency, but also opens the system to the dynamics of complex adaptive technological ecosystems where small perturbations can have large consequences, and where machinic actors make decisions that impact the lives of millions of human beings. We saw this in 2007–8 with the start of the global financial crisis. As digital technologies become more and more woven into the fabric of everyday life, a neat division between human and non-human actors and agencies becomes more complex.

HP: What you mention here are mostly systemic impacts of digital technologies. However, they do have an embodied effect as well...?

KH: They do. Dealing with digital technologies on a regular basis has physical and neurological consequences. Due to the enormous plasticity of the human brain, practices invited by ubiquitous digital technologies entail significant neurological changes. I mentioned this above already with reference to a shift in cognitive modes from deep to hyper attention, and the connected socio-technical and biological feedback loops with mutual amplification. Moreover, these effects are more pronounced the younger the cohort.

HP: So introducing for instance iPads into kindergartens at a regular basis would not be a good idea?

KH: It would contribute to a technologically enhanced rewiring of children's brains toward hyper attention at an age characterised by high degrees of neural plasticity. This might help them adapt even better to the socio-technical systems we are currently shaping, but it might come at a significant cost, the consequences of which we do not fully understand at present. We have to take these potential impacts seriously, and especially as teachers we should inspire and alert our students to forms of attention that may not come to them automatically from their environments, rather than going further down the same road they have already taken.

HP: What about digital technologies and the problem of surveillance?

KH: With digital technologies we have the capacity to capture and productively process unimaginable amounts of data. This has both advantages and disadvantages. The Snowden affair has made clear that these technologies make possible forms of surveillance and control that were almost unthinkable prior to the emergence of the Internet. So, the digital definitely has a dark side, but at the same time who would like to give up all the advantages that digital technologies bestow upon us? We need robust political and legal institutions that can mitigate and guard against the significant potentials for abuse by both state and private actors that the increasing ubiquity of digital technologies makes possible.

HP: Could we move on to a discussion of the role of the Humanities in this? What is their possible role in an encounter with digital technology? Is there a danger that they become obsolete?

KH: (laughs) The Humanities have a very important role to play because questions of meaning that the Humanities traditionally consider still have a salient position. Questions of meaning also are central in relation to our uses of digital technologies. Taking advantage of these challenges requires some changes or adjustments in the practices, methods, and theoretical basis of the Humanities. New forms of machine reading, for instance, have opened up whole new areas of research using quantitative approaches to corpora of literature far too large for any human to read. This machine reading does not replace or render obsolete traditional practices such as close reading, but it can supplement those and lead to new insights inaccessible without these technologies. New technologies also facilitate pedagogical changes regarding the roles of teachers and students, moving away from a one-to-many system of dissemination (for example, the traditional lecture) and toward technologically facilitated teaching practices such as a flipped classroom, innovative project work, or new forms of collaborative writing. By these means one can more easily tap into the enormous reservoir of knowledge, creativity and insights students always already bring to the classroom.

This opens the question of how the traditional university system might be changed through new practices enabled by digital technologies, such as massive open online courses, MOOCs. These have tremendous transformative potentials beyond the Humanities that might change contemporary higher education at a fundamental level and on a global scale. When students from anywhere can gain full access to the entire MIT curricula almost for free, this both enables learning world-wide and poses challenges to received institutional practices. I think academia as we have known it will transform radically and become almost unrecognisable by present standards in the decades to come. Universities are faced by challenges so profound that I suspect they will not exist in their present form for much longer.

HP: Given the systemic privileging of hyper attention and hyper reading in contemporary digital environments you mentioned before, do the traditional Humanities have a particular responsibility to train deep attention and forms of close reading as a counterweight to these tendencies?

KH: I agree with that. I think the traditional Humanities have a special role in cultivating deep attention, the ability to deeply concentrate on a particular subject with a high threshold for boredom and in-depth expert knowledge as likely outcomes. Deep attention, of course, is not only crucial for serious work in the Humanities but is a cognitive ability essential for almost any kind of advanced work, including the sciences and social sciences. Reading, and in particular the ability to read closely and with full concentration, is a universal skill that applies to every discipline. Given that this is the special provenance

of the Humanities, we would expect that the Humanities would have a special role here. I would like to emphasise once again, however, that digital technologies also enable other forms of reading, such as machine reading, that might open entirely new venues for research both in the Humanities and in other disciplines.

HP: One example for such a productive use of digital technologies for a Humanities-based inquiry would be the work by Sönke Neitzel and Harald Welzer. During the Second World War, British secret service wire-taped several cellblocks holding German and Italian prisoners of war. All the conversations among the inmates were recorded over several years creating a dataset so vast that it became unmanageable for human inquiry. Only after the material had been digitised, it became accessible to scholarly analysis. In their book *Soldaten*, Neitzel and Welzer detail how such techniques as topic cluster analysis or keyword indexing prepared the ground for deeper scholarly engagement with particular relevant subsets of the whole database. Here, I think, we see some of the possible synergies created through a productive combination of machine reading and close reading that emerges as characteristic of the Digital Humanities.

KH: That's a fascinating example that illustrates the potential of digital technologies for the Humanities.

HP: Could we move on to your method of comparative media analysis? As far as I understand, this method aims at maintaining productive focus on literature, but at the same time points beyond it in arguing that literary analysis is a media specific practice that has to be supplemented with attention to other medial forms?

KH: Some scholars trained in the Traditional Humanities tend to see Digital Humanities as a threat. They have spent decades developing sophisticated analytical skills, and suddenly it seems as if the Digital Humanities are devaluing these and replacing them with other skills such as coding, programming, etc. So, these people understandably feel antagonistic toward the new trends. In my view, this is a misreading of what the digital Humanities are about. One of the reasons I wanted to develop the framework of comparative textual media is to show that there are synergies between Traditional Humanities and new digital methods. The print book, after all, is a medium, along with the manuscript, the digital text, and so forth. The apparent division between the traditional and the digital can be rethought within a framework of comparative textual media. This move would also make it easier to form bridges between literature and other media that are not primarily textual. We should understand and productively explore the respective limitations, affordances, and possibilities of different media forms by directing our focus to the specificity of each medium rather than simply looking at 'the' content.

HP: Right now you were talking about comparative textual media. In How We Think you use the term comparative media studies. Could you briefly explain how these methodological frameworks relate to one another?

KH: Comparative media studies explicitly include media that are not primarily textual. Comparative textual media is therefore a subfield of comparative media studies.

HP: We have, so far, looked into how digital technologies change human beings and how the Humanities should or could respond to that. But how can we grasp those changes and the possible effects of digital media on a theoretical level? You use the term technogenesis for this purpose. Could we return to this concept and briefly inquire into what it means both in terms of the digital era, but also earlier?

KH: Developing the concept of technogenesis, I follow in the footsteps of Bernard Stiegler, who convincingly argues in *Technics and Time* that human involvement with technology did not happen at a late stage of human evolution but was there from the beginning of Homo sapiens. As Steven Pinker has argued, there is a link between the evolution of the human nervous system and the growing capacity to use language and to fabricate and use complex tools. The brain, language, and culture, including technology, co-evolved together. Stiegler points out that this co-evolution between formed objects and human beings already took place in the Paleolithic period. To put it in simple terms: we invent things and things invent us. We effectively co-evolve. My concept of technogenesis looks at these processes in the historical present. In particular, I look into the effects of digital technologies on human neurology and behaviour.

HP: You look into this in evolutionary terms...

KH: Evolution is about more than genetic make-up alone; it is also about the influence of culture on shaping human neurology as well as human behaviour. In the late 19th century, James Mark Baldwin argued that evolutionary theory must take into account the feedback loops between genetic evolution, behaviour, and the environment. Species experience an adaptation, and as a result of that adaptation, they change their environment so that it favours that adaptation even more. In this way the adaptation gains even more fitness advantage and spreads even more pervasively through the population. These recursive processes are called the Baldwin effect. If we think about this in terms of digital technologies, we can say that there is not necessarily a genetic change in human

neural structures but an ontogenetic change that occurs after one is born. Because of the brain's extraordinary plasticity, an infant's brain undergoes synaptogenesis, in which synaptic networks stimulated by the environment strengthen and spread, whereas those less stimulated shrink and diminish. If cultural environments change relatively slowly in relation to human lifetimes, generations will undergo similar ontogenetic changes. If cultural patterns change more rapidly—as has been the case since the development of digital technologies—the ontogenetic changes across generations will vary more widely. Whatever the case, neurological changes after birth become part of the cultural inheritance of a species, laid on top of and interacting with their genetic inheritance.

HP: Could you give an example?

KH: Young people in developed societies tend to reconfigure their environments to favour ontogenetic adaptations such as a growing capacity for hyper attention. As a result, they crave ever more intense informational stimuli, which for example takes the form of rapid attentional switching between different media, different sites, different sources of information. Their reconfigured environments in turn enhance their cognitive ability to take in different information streams, and at the same time increases the pleasurable effects of doing so. Simultaneously, these ontogenetic changes are in constant interaction with inherited genetic tendencies and predispositions. Think, for example, of the age-old fascination of looking at a flickering fire. This ancient practice may well be a genetic predisposition, which now is in active interplay with an ontogenetic disposition to channel surf or multi-task with multiple screens open at once.

HP: You have recently dealt with questions pertaining to an object-oriented ontology, which you rephrased as object-oriented inquiry...

KH: It is my contention that the Humanities have too long disregarded the materiality of processes. When I encountered Graham Harman's object-oriented ontology in *The Quadruple Object*, I felt that finally, someone is paying attention to objects. But when I learned more, I found that my enthusiasm was somewhat premature. Although Harman trades on a commonsensical understanding of objects. in his ontology the crucial idea is that objects recede forever from us and we have no ability to know them. Therefore, for my purpose, object-oriented ontology is not moving in a direction I personally would like to see. On the contrary, it is moving in a direction precisely away from a viable and productive attentiveness to the materiality of processes. Take Ian Bogost, for instance, who in his book *Alien Phenomenology* is inspired by Harman. Bogost is interested in the materiality of processes and devotes a large section to explaining the material basis of a certain kind of

camera sensor, a predilection I applaud. Nevertheless, he seems to accept Harman's idea that objects recede infinitely from our ability to know them, so he tries to smooth over the discrepancy by saying that his description of objects is merely metaphoric. But to me, it is not very productive to call every description a metaphor. As a former scientist, I believe that we are able to achieve reliable knowledge about an external reality. We do not really need to grasp what reality is in itself, if that concept even makes sense. What we need is a robust interface through which we can interact with objects, and that robust interface requires a detailed knowledge about the material processes constituting our relations to objects.

This leads over to my second problem with Harman's approach, namely that I perceive it as anti-relational. In Harman's ontology, as soon as a relation between entities is formed, it ceases to be a relation and reemerges as a new object. He constantly converts any relationality into ever more complex objects. So ultimately there is no way in his philosophy to talk about relationality as such.

HP: In your object-oriented inquiry you state that objects can only emerge to us through their resistances, through what we cannot know about them, what we cannot do with or to them ...

KH: Yes, and here I have a certain overlap between my thought and Harman's. Harman has a kernel of insight in his idea that objects recede from us. I would say, however, that they do not so much recede as resist. And it is the resistance of objects to us that is the source of our most instructive insights about them. In understanding the nature of those resistances and working within them, human knowledge is able to progress and increase. Resistances force us to modify our questions, and the modified questions uncover new forms of resistance, in a continuing cycle that Andrew Pickering has called the "mangle of practice." Attention to how objects resist human probing is based on a negative understanding of knowledge. We cannot know what an object is in itself (here I am in agreement with Harman), but we know when our conceptions of it fail to work. These negative answers enable increasingly fine-tuned distinctions, increasing the robustness of how we think about our interactions with objects as we revise and rework our conceptions and practices. This cycle alerts us the fact that objects emerge for us always through their relations to other objects and with us. Reducing these relations to ever-new classes of objects, as Harman advocates, would foreclose such relational and reciprocal, understandings.

HP: One example for such an object-oriented inquiry might possibly be taken from nuclear

physics regarding the model of the atom composed of a core and the electrons circling it? Science cannot tell us where exactly an electron is located at a given moment, but scientist can certainly tell us where it is not. This where-it-is-not gradually increases as our knowledge of the subject grows, however without ever reaching a point at which we can determine an exact location. This way, reality in its ultimate form recedes, but still leaves us with a huge variety of approximations that gradually become ever more sophisticated as our knowledge progresses. This thinking re-asserts, I believe, the ultimate contingency of the object world, without however falling prey to a disabling relativism. We have to accept the fact that we can never know the external world exactly, but this does not leave us without viable means to acquire valid knowledge. One could possibly say that this perspective reasserts a notion of necessary humbleness into the discourse of the scientific profession.

KH: The revolution in thinking brought about by quantum mechanics was profound, and its implications are still being explored in such phenomena as entanglement and decoherence. I'm not sure I agree with your analogy, because it equates quantum indeterminacy with a more general epistemological limit on the nature of knowledge, but we should remember that quantum effects become negligible (although still present) at macroscale levels. I tend to favour Karen Barad's take on this in her notion of "agential realism," in which she argues that the experimental apparatus is part of what determines the kinds of observations that a given experiment will yield (a point she develops from the philosophy of Niels Bohr). From here she makes a leap into ontology, arguing that reality itself is brought into being by intraactions between agents; without these intra-actions (which might be between subatomic particles, between particles and instruments such as those at CERN, or between humans, instruments, and particles), reality could not exist. Hence the point is not so much a limit to our ability to know the world, but rather our active participation, along with myriad other agents, in bringing the world into being as such.

HP: Before we round up our conversation, would you like to say something about any ongoing projects of yours?

KH: My latest interest is in forms of nonconscious cognition and I'll say this twice: it is not unconscious cognition, but nonconscious cognition. I work with a framework consisting of three levels: firstly, the conscious and unconscious as modes of awareness, secondly nonconscious cognition, and thirdly material processes. The boundaries between these are not clear-cut. Often they overlap and are quite porous. But this tripartite framework provides a way in which to more comprehensively approach the various roles of cognition in human life. As recent work in the neurosciences and the cognitive sciences has confirmed, most of our mental life is nonconscious, not unconscious as Freud thought - not hidden from consciousness through mechanisms of suppression and repression - but consisting

of cognitive nonconscious processes that are simply inaccessible to consciousness, no matter how hard consciousness tries to access them. These nonconscious processes filter the enormous amount of information coming from the body and from the environment through sensory perceptions, recognising patterns, drawing inferences, and adjudicating between conflicting and ambiguous information.

It has become clear during the last decades that consciousness has a limited ability to process information compared to its unconscious and nonconscious counterparts, both in its speed of operation and in the amount of information with which it can deal. Nonconscious cognition supports consciousness by filtering out irrelevant information, feeding forward only that which is contextually relevant at the moment.

HP: The nonconscious functions as a filter to avoid information overload...

KH: Yes, but it does more than that. The nonconscious has a tremendously important role to play in understanding human mental life. It can, for instance, provide new insights regarding the various affinities and commonalities we share with animals as well as technical systems. Most of the time, our bodies react entirely nonconsciously to external stimuli; we share this behaviour with many biological lifeforms, including other animals who, like us, have consciousness, which in my view includes many other animals, especially mammals In addition, many contemporary technical systems exhibit nonconscious forms of cognition that impact significantly upon human cognition and conduct. Nonconscious cognition, spanning humans, animals, and technical systems, allows for a more fine-tuned analysis of interactions between these entities.

The tripartite framework can be envisioned as a pyramid, with modes of awareness at the top, supported by nonconscious cognition below it, and underneath that are material processes. While this metaphor grants the "highest" position to consciousness, it also allots to conscious/unconscious modes of awareness the smallest volume of space. This accurately reflects the conclusion that many cognitive scientists now accept, that human behaviour as a totality is comprised much more of nonconscious cognition than of consciousness. Which brings us back to the issue of profoundly questioning the implicit assumptions underlying the autonomous humanist liberal subject.

HP: To round up this conversation, I would like to briefly return to the issue of digital technologies and surveillance. Would you award Edward Snowden with the Nobel Peace Prize?

KH: (laughs) I don't know about the Nobel Peace Prize... but I think that it is correct to say that Edward Snowden is a patriot, as the recent Wired cover suggested by showing him wrapped in the American flag. Patriotism does not mean to blindly endorse any action a government takes. Real patriotism, in my opinion, is criticising a government when necessary and supporting it when necessary, so that it is able to sustain the principles on which a democratic political order is built.

HP: Katherine Hayles, thank you very much for your time.

Biographical Notes

Holger Pötzsch (PhD) is associate professor in Media- and Documentation Studies at the Department of Culture and Literature at UiT Tromsø, Norway. His main areas of interest are the war film, war games, and the interrelation between new media technologies and processes and practices of (violent) in/exclusion. Pötzsch is coordinator of the WARGAME-research group and co-coordinator of the ENCODE-research seminar (both at UiT Tromsø).

N. Katherine Hayles, Professor of Literature at Duke University, teaches and writes on the relations of literature, science and technology in the 20th and 21st century. Her book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* won the Rene Wellek Prize for the Best Book in Literary Theory for 1998–99, and her book *Writing Machines* won the Suzanne Langer Award for Outstanding Scholarship. Her most recent book is *How We Think: Digital Media and Contemporary Technogenesis*. She is currently at work on a book entitled *Expanding the Mind of the Humanities: Nonconscious Cognition*.

Notes

[1] The interview was carried out on September 28, 2014 in connection with a guest lecture by Katherine Hayles at UiT Tromsø, Norway. Her visit was arranged by the ENCODE-research hub at UiT Tromsø and was funded by the Dept. of Culture and Literature and the Centre for Peace Studies. More information on the ENCODE-research hub can be accessed here: http://digitalmedia.wikidot.com/.



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