

Interactivity is Affectivity

The report of the death of interactivity comes from Mark Andrejevic (2001). He calls the initial failure of the Big Brother television format in the United States a watershed moment in the passage from interactivity to what he terms, following Slavoj Žižek, interpassivity. During its first season, viewers voted off the show's most interesting participants, the ones most likely to fight, seduce, connive and be generally entertaining. Understanding their tactical error, executives opted for an alternative format in the second season, whereby the Big Brother participants themselves did the voting, ensuring a maximum of drama inside the house. For Andrejevic, the story highlights the incompatibility of the democratizing potential of interactivity ("power-sharing") with its imperative from the finance departments, i.e. to offload work to the consumer. Synthesis comes in the form of 'interpassivity', "the unobtrusive monitoring built into the digital TV that keeps track of [the audience]" so as to offer TiVo-like recommendations.

The narrative holds that, by default, real control will always elide consumers of interactivity, and represents a necessary critique of the so-called liberating potential of new technologies. It appears to me, though, that interactivity is an exceptional target. This is no doubt due to the simple fact that one hears about interactivity *all the time* – the term's overwhelming presence in everything from entertainment and education to art and politics has long set in motion backlashes in each of these areas. As Andrejevic astutely argues, the equation of interactivity with user control and empowerment generally amounts to no more than an easy selling point with little substance. But to then conclude that this is the *pacification* of interactivity is, perhaps, to skip a step. If the selling point is fully rejected, as it should be, then why stick to the framework that pits interactivity against control at all? What is interactivity after empowerment?

This essay an attempt to define interactivity, albeit one that falls knowingly short: I try to avoid positivism in favor of a conscious engagement with some of the uncertainties and inconsistencies in the 'history' of interactivity that make it a difficult concept. I trace a more traditional genealogy of the term's use in new media studies, from cybernetics to interface

design, before turning to its broader context today: Alexander Galloway's (2004) study of the material base of postmodern power in *Protocol* and Andrew Barry's (2001) account of interactivity as a 'diagram' of Foucauldian government. Finally, I argue that an examination of the relationship between interactivity and affectivity, or the capacity to be affected, is necessary in order to draw the connections between interactive media and forms of power and marginalization that complicate the ageing frames of (dis)connection and (dis)empowerment.

Cybernetics and the Enemy Other

The story of cybernetics normally begins with Norbert Wiener and his World War II work on the anti-aircraft (AA) predictor. Looking to improve the performance of anti-aircraft guns, Wiener created a system that would predict the movements of aircraft based on the history of their actions. The system would process 'live' input – information on distance, speed, direction, etc. – and output a prediction of the plane's position over a certain period of time (a matter of seconds). The significance of this innovation was certainly not lost on its instigator: "As the AA predictor came to fruition, Wiener came to see it as the articulated prototype for a new understanding of the human-machine relation, one that made soldier, calculator, and firepower into a single integrated system" (Galison, 1994: 235). In the context of cybernetics, interactivity can be thought of as a cumulative process of communication or feedback between systems, whereby each system involved achieves different states. Cybernetics is the study of control in such systems, and has been described more generally as "the art of ensuring the efficacy of action".¹

In Peter Galison's (1994) account of that period, the centrality of Norbert Wiener is offset somewhat by accounting for another important figure, what he terms 'the Enemy Other'. "This was the enemy, not of bayonet struggles in the trenches, nor of architectural targets fixed through the prisms of a Norden gunsight. Rather, it was a mechanized Enemy Other, generated in the laboratory-based science wars of MIT and a myriad of universities around the United States and Britain" (231). This mechanized enemy had to be constructed in a way that it would best imitate, say, bombers of the German *Luftwaffe*. In other words, to improve the human-machine interactions of the AA predictor, Wiener and his colleagues had to first configure its 'cyborg' precursor, the human-machine interactions that produced the AA predictor's fast-moving targets. "It was a vision in which the enemy pilot was so merged with machinery that (his) human-nonhuman status was blurred" (233).

¹ attributed to Louis Couffignal; cf. *Wikipedia*, 'Cybernetics'.

As Wiener himself notes, the roots of cybernetics can be traced much further back than the Second World War. He points to an overarching shift from an age characterized by the technology of steam engines and the science of thermodynamics to the current era of communication and control. Wiener argues that a pivotal change was the emergence of communication engineering, employed by pioneers of the telegraph: "what distinguishes [communication engineering] from power engineering is that its main interest is not economy of energy but the accurate reproduction of a signal" (1965 [1948]: 39). This is reflected in the story of the AA predictor. During experiments, Wiener came to recognize the problem as one of irregularities, or *noise*, produced by the antiaircraft operator and by the enemy pilot. In a sense, these two figures were united in the laboratory: "Wiener and his team began to conceive of the Allied antiaircraft operators as resembling the foe" (Galison, 1994: 233). Eliminating irregularities on the part of the operator was a matter of developing the right servomechanisms. As for those precipitated by the enemy pilot (evasive maneuvers, changes in tactics), Wiener would require an amount of statistical data that would prove impossible to accumulate at the time. The AA predictor was not a success but, needless to say, the principles behind it were.

A cybernetic approach to interactivity takes as its starting point the need to improve communication between systems, and hinges on a few basic premises. One crucial point is the behaviorist outlook, in which the object is understood based on its interaction with its environment rather than its structure or nature. A second point deals with the centrality of feedback. The emphasis in the science of "communication and control" is above all the controls of communication. This includes the 'precision' and reproducibility of signals mentioned above and, more generally, the monitoring, checking and controlling of messages between systems. It is a point Wiener makes most clearly in discussions of physiology: "[F]or effective action on the outer world it is not only essential that we possess good effectors, but that the performance of these effectors be properly monitored back to the central nervous system" (1965 [1948]: 96).

In addition to the influence of these core characteristics of cybernetics on the natural sciences, these arguably triggered larger shifts in discourses on all things social, including 'posthuman' takes on subjectivity – with examples including Donna Haraway's (1992) cyborg as well as Deleuze's (1992) notion of the "dividual". But now I want to turn to cybernetics' less spectacular legacy in the areas of Information Technology and interface design.

Interactivity by Design

Where Norbert Wiener designed for the Enemy Other, designers have the User. With interface design, one could say, interactivity is part of a larger *problem* one must solve. To contextualize this claim, it is worth quoting the opening paragraphs of the seminal work *Interactivity by Design*:

"By definition, the things people do on computers have always been interactive. Computers and software are tools, and their purpose is to help people interact with words, numbers, and pictures. What's different today is that computers are being used for activities that never used to be considered interactive – such as reading, watching, or simply being entertained. And this means that the audience, not the designer, now controls the sequence, the pace, and most importantly, what to look at and what to ignore.

With tools for interactivity now available on every desktop, people everywhere are turning documents and presentations into interactive experiences to be viewed on the computer screen. They are discovering that adding interactivity is easy, but making interactivity really work is a whole new process – the process of creating interactivity by design" (Kristof and Satran, 1995: 1).

The authors go on to describe a number of design principles: establishing clear goals, giving users an overview, achieving stylistic unity and the like. Throughout, there is a sense that the design must achieve a kind of transparency. The “purpose” of the interface is to not get in the way of users’ (presumed) intentions. In this sense, one might like to think of the interface as what Bruno Latour calls an “intermediary”, an agent which, despite any complexity it may comprise, “transports meaning or force without transformation: defining its inputs is enough to define its outputs” (2005: 39). Computers should do what we want them to, no more and no less.

But there are a few problems with this. One is that in attempting to maximize clarity and transparency, an interface imposes unnecessary limitations on potential action. In ‘The Anti-Mac Interface’, Don Genter and Jakob Nielsen (1996) argue that, despite their virtues, the principles that have guided the development of the graphical user interface (GUI) from the Macintosh on should be rethought.² Rather than a continued focus on real-world metaphors, generating feedback for every user action, the maxim ‘what you see is what you get’ (WYSIWYG) and keeping users in control – being generally ‘user-friendly’ – the authors propose a more central role for language, ‘shared control’ and a more expressive

² Though the authors are specifically concerned with the interface of the operating system, I consider their critique as relating to software interfaces more generally.

interface that makes full use of today's hardware. In their call for a design for expert users, one might imply from the authors that current GUIs limit or even *form* users by addressing them as having certain qualities (e.g. inexperience).

Indeed, a 'passive danger' lurking between the lines in Kristof and Satran's book is user-generated 'noise'. "[I]n the end, interactivity is people using new media to communicate ideas, knowledge, and art in much the same way that people have always communicated" (1995: 120). But today, "choice can take users in unpredictable directions and combine elements of the design in unpredictable ways. That's why interactivity calls for a greater commitment to planning, to usability, and to making the pieces work together than communication has ever demanded before" (ibid). The earlier allusion to users as zigzagging enemy pilots is cynical, but was made to highlight that a particular understanding of the User, like the Enemy Other before it, is necessarily articulated by software and that this has effects.

A second problem with the transparent interface, then, is the way it naturalizes a certain 'version' of the user. Or, to borrow another term from Latour, the GUI has "formatting power" (2005: 221). Steve Woolgar (1991) demonstrates this clearly in his famous case study. Woolgar frames what he calls the 'configuration' of 'the User' with the larger issue of agency, posing the classical question, "do characteristics reside in, or are they attributed to entities?" (65). He details his ethnographic research (as an assistant project manager) at a large computer manufacturer during the development of a new machine, and looks to show how in this moment of innovation, machine and user come to be defined by their relationships to one another. He likens the computer to a text, and argues that its particular construction both enables and constrains users. The problem of agency and attribution is magnified by the complexity factored into the act of construction:

"In configuring the user, the architects of [the computer], its hardware engineers, product engineers, project managers, salespersons, technical support, purchasing, finance and control, legal personnel and the rest are both contributing to a definition of the reader of their text and establishing parameters' for readers' actions" (69).

Creating a text, Woolgar explains, is a matter of establishing boundaries. The computer, programmable in theory, in practice is closed off to the user. The computer-text's real plastic enclosure is a metaphor for the 'place' of Expert and User. Those with access to the inside (i.e. the company) "know the machine, whereas users have a configured relationship to it, such that only certain forms of access/use are encouraged" (Woolgar, 1991: 89). And while "this never guarantees that some users will not find unexpected and uninvited uses for the

machine [...] such behavior will be categorized as bizarre, foreign, perhaps typical of mere users” (ibid).

In design, then, interactivity is entangled in issues of usability and even authority. The criticisms of Genter and Nielson point to the problems of thinking of interactivity as ‘liberating’ at the level of interface. In this way the transparency of the interface – its status as an intermediary – is questioned, while its agency in defining, enabling and constraining action is highlighted. That is, as Woolgar notes, the user is ‘configured’. What one sees, then, is the now-classic reversal outlined by Zizek (2002) in his writings on interpassivity: what was thought to be passive and transparent (the interface) is now understood as a mediator, as active, while what was thought to be active, the user, becomes a passive intermediary.

Transparency after code, interactivity after experts

The work of interactivity – from the transparent interface to the configured user – has a material and discursive context that extends well beyond the immediate ones of design and use. On the one hand, signaling an important shift in cultural studies, theorists increasingly grant ‘code’ a prominent position, investigating the extent to which it ‘stands alone’ as a form of cultural expression (of course this happens in distinct ways: e.g. Cramer, 2005; Hayles, 2005). On the other, conceptions of interactivity have strayed far from the field of Human-Computer Interaction, characterizing what are perceived as new, enterprising approaches to good government, from education to health and politics. It is at this point that interactivity can be rethought as a technosocial form of organization, marked by its emphasis on interactive technologies and on social formations that reduce or remove hierarchies to promote ‘feedback’.³ In addition to being a problem for the designer, it becomes one for the social theorist, too.

Protocol

Interactivity has its material base in code. In *Protocol: or how control exists after decentralization*, Alexander Galloway (2004) describes the contradictory logic that governs distributed networks. Despite conventional perceptions of the Internet and the World Wide

³ It is also at this point that some confusion may arise over when I am discussing ‘network organization’ and when I mean ‘interactivity’. Here I am sticking to Galloway’s (2004) distinction between different types of communication networks – centralized, decentralized and distributed – and consider interactivity to be the technosocial form associated with (but not limited to) the distributed network.

Web as unregulated and chaotic, Galloway argues that these networks are in fact highly controlled. This is a matter of standards: in order for a node to send and receive data, it must follow a set of agreed-upon instructions. This would be the case for any kind of network, but the need for both flexibility and robustness in the distributed network calls for a particular kind of organization, which is that understood by Galloway as 'protocol'. Beginning with the Internet Engineering Task Force's 'request for comments' (RFCs), he reviews the multiple ways in which the distributed network is characterized by the opposing forces of autonomy and control. The protocols governing the transmission of data and allowing for the greatest freedom of communication between nodes (Transmission Control Protocol/Internet Protocol), for instance, are contrasted by the hierarchical addressing system (Domain Name System) that centralizes control of the Internet on a small number of servers.

Related to this opposition between autonomy and control is code's 'hiddenness'. Looking to explain the formal qualities of protocol, Galloway invokes Marx's "form of appearance", the "dialectical process in which objects or qualities transform into their opposites through the process of representation" (100-1). On the Web, code is layered and hides itself – for instance HTML wraps around Web content, but is itself only visible when one 'views source' – with the effect being much the same 'transparency' mentioned earlier in relation to interface design. But in Galloway's argument, this logic of hiddenness scales. So along these lines, for instance, Ryan Bigge (2006) suggests that part of the success of the social networking site Myspace.com is its highly professionalized, 'amateur' aesthetics.

If this logic of transparency reveals approximate connections between the technosocial arrangement of interactivity and the ostensibly technical one of protocol, the relationship is taken a step further by Galloway in his discussion of protocological 'futures'. For instance, he relates protocol to post-industrial modes of production such as Toyotism. Flexible and robust like the distributed network, this management style uses "small pods of workers" that are "not linear and fixed like the more traditional assembly line, but [...] reconfigurable depending on whatever problem might be posed to them" (2004: 159). Galloway also makes an important point about power in the distributed network, saying that resistance is *included*, and drawing on the examples of hacking and tactical media to support this claim. Rather than underlying libertarianism or a larger 'truth' about information, "what hacking reveals" is "the exciting new ability to leverage possibility and action through code" (172). In thinking protocol and interactivity together, then, both the materiality of interactivity and its relation to historically specific modes of organization are brought to the fore.

Interactivity as Government

Galloway's dialectical argument, that in order to be liberating a distributed network must also be highly controlled, may also be read somewhat in Andrew Barry's (2001) consideration of interactivity as a diagram of government. To be an autonomous, active citizen, one must also be interactive, or well *connected*.

In the chapter 'On Interactivity', Barry takes the starting point that the individualized and enterprising subjects imagined by neo-liberalism are not so much a consequence of changing ideas in government, but must be *made*.⁴ The autonomous citizen described by Nikolas Rose, for instance, self-governs, is responsible, makes informed decisions and approaches everyday life with a business-like sensibility (1999: 83-98). To do so, however, she must be connected to the right interactive technologies, from the cell phone to Google.

Understanding government broadly, in the Foucauldian sense of 'the conduct of conduct', Barry argues that interactivity increasingly appears as a solution to the anxieties of governing a technological society – from the preservation and development of 'intellectual capital' to waning interest in engineering and science. Some context-specific version of interactivity – both in terms of technical objects and social practice – is often put forward as a way to increase participation, whether in the classroom, at work or even in the political process. A recent manifestation is the YouTube debates, a collaborative effort with CNN to involve YouTube users in the U.S. presidential primary debates. The project was introduced in the following way on the official Google blog:

"Back in March we kicked off our You Choose '08 program, a hub of political channels on YouTube designed to educate, empower, and connect voters and presidential candidates through the power of online video [...] Today we're announcing another way that YouTube is leveling the political playing field: The CNN/YouTube debates. For the first time in history, the questions asked in both a Democratic and a Republican primary debate will come straight from YouTube videos" (Grove 2007).

As a technical solution ("the power of online video") to perceived social or political imbalances, interactivity seems alive and well.

For his analysis, Barry turns to the modern science museum. National museums, he says, have historically been important sites for state objectives such as the justification of empire or the communication of cultural values and norms. Tracking the interactivity

⁴ Barry makes specific reference to the 'autonomous citizen' described by Nikolas Rose (1999).

‘diagram’ across national contexts, Barry shows how it is continually translated as it enters new spaces, providing different solutions to different problems. In the Exploratorium in San Francisco, for example, interactivity is strongly associated with the democratic empowerment of individuals – direct participation, it is thought, demystifies science and allows for a feeling of appropriation on the part of the visitor. Another example is Britain, where Barry links interactivity with less grandiose aims, and more closely with the need to awaken interest in the museum and improve public understanding of the natural sciences.

Barry argues that interactivity has transformed the manner in which museums educate the public, and offers some general characteristics of the new arrangement. First, participation is explicitly voluntary – the interactive exhibit encourages play rather than demands attention. Barry quotes Zizek in distinguishing between the disciplinary imperative, ‘You Must!’ with the interactive one, ‘You May!’ Second, interactivity emphasizes ‘hands-on’ learning, and proximity to the object is considered essential (except, Barry notes, in the case of older, ‘authentic’ objects which are preserved at a critical distance). Third, there is the aestheticization of science, with a prime example being the expressive visuals of La Cité des Sciences et de L’Industrie at La Villette in Paris. Spectacle itself becomes an index of the technological future: “At La Villette, the future *is* interactive. Visitors to the museum do not purchase a ticket, but a machine readable smart card on which is written the demand ‘Découvrez!’” (Barry, 2001: 144). Fourth, expertise moves to the background: visitors make scientific principles visible to themselves through interaction with exhibits.

The characteristics of interactivity described by Barry are grounded in his ethnography of the museum, but can also be observed more broadly. The command ‘Discover!’, for instance, reverberates in ageing Web metaphors (‘Explorer’, ‘Safari’, etc.), while Web 2.0 applications that are increasingly hard to avoid, such as MySpace and Facebook, epitomize the interactive imperative ‘You May!’ As Siva Vaidhyanathan (2007) argues, such Web services, while definitely apparatuses of surveillance, differ from the ‘panoptics’ of disciplinary power in that they *encourage* transgressive behavior rather than work to suppress it. Also, the aestheticization of science Barry mentions is complemented today by its converse: one example is Carsten Höller, who “uses his training as a scientist in his work as an artist, concentrating particularly on the nature of human relationships” (Carnegie International ‘Artists’ bios: Carsten Höller). Höller’s 2006 work *Test Site* transformed the main hall of the Tate Modern into something of a giant playground, with slides up to 55

meters tall. In the way it foregrounds the embodied response of the museum visitor, Höller's work points to contemporary preoccupations with spectacle and sensation, the scientization of art and perhaps 'interactivity' more generally.

How are the material and political contexts of interactivity related to one another? The protocological base, with its opposing drives toward openness and diversity on the one hand, and strict standardization on the other, may be thought consistent with the new forms of citizenship described by Rose and Barry. The dialectic is extended, as the relative freedom of autonomy is counterbalanced by an increasing dependency on the technical, interactive devices that make it possible. The 'hiddenness' of protocol – which Galloway argues is essential to our sense of continuity and immediacy on the Web – is not unlike the absence of 'the expert' at interactive exhibits in the museum. At these exhibits, the construction and determination of the experience is in one sense removed from view, though the aim or "program of action" (Latour, 1991: 105) may be the same as in other, non-interactive exhibits. But as sociologists of technology make clear, the point is that changes in the technological means necessarily produce different ends. And this forces the next question: if interactivity is something *in excess* of a new technology for achieving more of the same, what exactly is that remainder?

Interactivity is Affectivity

So far I have considered interactivity from various angles, discussing the influence of cybernetics, the politics of design for new media as well as interactivity's material and political contexts. Each of these, I think, contributes to a general view of interactivity as empowering and a critical one that looks to show how many interactive technologies are in fact not really interactive at all. In this last section, I switch gears somewhat and ask what these views are missing.

Drawing on the work of Brian Massumi (1995) and Steven Shaviro (2003), among others, I ask how one might theorize and understand the 'affect' of interactivity. Or actually, since the aim is not to essentialize, the 'affects' of interactivities: historically specific instances of interaction that produce altered affective states. Affect is an ambiguous concept, but strongly associated with physiology and the embodied 'intensity' of feelings and emotions. It is sometimes understood as 'pre-subjective', and bound up in the problem of free will (Massumi, 1995: 90). It is used quite differently in a range of disciplines but in each of these, as Nigel Thrift points out, it is "understood as a form of thinking, often indirect and non-reflective [...] Affect is a different kind of intelligence about the world, but it is an

intelligence nonetheless” (2004: 60). Is it possible, as a way to both problematize and possibly benefit the ideological critique of interactivity offered by Andrejevic, to incorporate affect in analyses of interactive media? If so, how might it be studied, and in what ways can it be understood beyond the ‘feel’ of interactivity and connected to larger questions of government and power?

In Massumi’s (1995) account of the importance of affect, he argues that ideology is showing cracks. Instead it is affect that provides the key to postmodern power, as demonstrated in figures like Ronald Reagan, who could mean so many things to so many different people. Reagan, defined by an air of confidence despite his dysfunctions and contradictions, the Great Communicator despite his seeming inability to construct a grammatically correct sentence, was “an incipience” (103). But “Reagan operationalized the virtual in postmodern politics” (102); his stuttered movements and unfinished speech were ‘completed’ further on, after his various re-productions in the media. “Receiving apparatuses [...] selected one line of movement, one progression of meaning, to actualize and implant locally” (ibid). Families, schools and churches each had their own version of Reagan to support. In the absence of a one-to-one connection between the ideological apparatus and its actualizations, affect is ‘political’ in as far as it overlays the virtual onto the actual, opening up multiple lines of movement while closing others down. If affect, in its strictest sense, is simply the body preparing itself for action, then the ‘affective moment’ is crucial as it is one of indeterminacy. Massumi argues that now attention must be given to various ways media inscribe the virtual into everyday life – what might be thought of, following Margaret Morse (1990), as the presence of ‘elsewhens’ and ‘elsewheres’ in the here and now.

“What is of dire interest now, post-Reagan, is the extent to which he contracted into his person operations that might be argued to be endemic to late-capitalist, image- and information-based economies. Think of the image/expression-events in which we bathe. Think interruption. Think of the fast cuts of the video clip or the too-cool TV commercial. Think of the cuts from TV programming to commercials. Think of the cuts across programming and commercials achievable through zapping. Think of the distractedness of television viewing, the constant cuts from the screen to the immediate surroundings, to the viewing context where other actions are performed in fits and starts as attention flits. Think of the joyously incongruent juxtapositions of surfing the Internet. Think of our bombardment by commercial images off the screen, at every step in our daily rounds. Think of imagistic operation of the consumer object, as turnover time increases as fast as styles can be recycled. Everywhere, the cut, suspense – incipience. Virtuality, perhaps?” (Massumi, 1995: 103-4)

Massumi's understanding of virtuality, much like Shaviro's discussion of the "ontology of the virtual" (2003: 92-4), is thus hardly in line with the well-known utopian visions of Virtual Reality. While virtuality is still connected to possibility, in terms of affect it is as much about precarity and entanglement as it is about comfort and escape. Interpreting the 'virtuality' of the science fiction worlds in Philip K. Dick's work, Shaviro remarks, "Being is not a plentitude. It is always somehow fake, or trashy, or incomplete, or unstable, or radically inconsistent" (94). What are the connections between virtuality-as-instability, affect and interactive media?

Like Massumi, Richard Grusin (2007) suggests an approach to new media that accounts for their work in regulating and organizing affect. If governmentality is understood as the distribution of power through discursive, economic and material means, Grusin says its affective counterpart is 'mediality'. The now everyday practices of taking snapshots with a digital camera and sharing the photographs with friends, talking and texting on mobile phones, checking one's email and RSS feeds, maintaining contacts through social networking services, etc., serve to modulate affect, to tweak it in specific ways that alter the subject's relation to the world out there. An experience might be intensified by its mediation in a certain form. Grusin argues, for example, that the shock or affective response produced by the Abu Ghraib photographs must be thought not just in terms of their shocking content, but also their appearance in a form (digital photography) that is so 'close' to us. Perhaps something similar could be said about the visceral experience of seeing the grainy footage of Saddam Hussein's hanging on YouTube, complete with viewer ratings and comments. Twisting Grusin's argument somewhat, I think it is possible to suggest that the affective modulation performed by different media forms, their mediality, is contingent on their affordances, including varying levels of connectivity, the ease with which they enter and disrupt different spheres (public, domestic, etc.), their 'seamlessness' or lack thereof, whether they are 'push' or 'pull' media, and so on.⁵ In short, I want to explore the extent to which 'interactivity' translates into 'affectivity', or a capacity for affection. It should be pointed out

⁵ J.J. Gibson coined the term affordance to denote a "complementarity of the animal and the environment" (1979: 127), including potential, non-conscious connections, linkages and resonances between subjects and objects (as well as actual, perceived ones). Since then, Donald Norman and others have reworked the term into something more practical for designers, i.e. real and perceived affordances (e.g. Norman, 1999: 39). Following Matthew Fuller's (2005) ecological approach to media, this attempt to rethink interactivity would require reverting from Norman's design-influenced definition of the affordance to Gibson's ecological one.

here, though, that this requires some rethinking of what constitutes interactive. As theorists of visual culture have repeatedly noted in reaction to the appearance of new, ‘interactive’ media, viewers have never been passive (e.g. Morley, 2003: 439). But the flipside of that claim is the question being asked here: how do various media forms affect and activate, as opposed to determine or empower, differentially?

Away is the new Online

For now, there are only more questions. In a way, this approach is like asking how interactivity *feels*. But it also means realizing that the answer is more important than that phrasing suggests. Assuming that the mediality of interactive technologies has political significance – (re)configuring the user, opening up some lines of movement while closing others down – how can this be described and placed in the broader material and political contexts of interactivity discussed earlier? That is, how can one historicize the specific ‘affective politics’ of instances of interactivity? Another question is that of method: affect, with its emphases on non-consciousness, complexity and emergence, etc., remains an elusive concept because it is by default difficult to study or observe – Massumi says it can only be measured through its effects. While that problem is far from being fixed, I want to suggest here that new media do offer new possibilities for interpreting such effects.

‘Away is the new Online’ was a user name I chose for an Instant Messenger application, one that allows users to set their status as it appears to others (to ‘online’, ‘busy’, ‘away’, ‘offline’, etc.). It was a joke: having noticed that some users, myself included, set their status to ‘away’ in order to pre-fabricate an excuse for not responding to some incoming messages, I thought it would be fun to go ahead and state the obvious (though after choosing that name I began setting my status to offline). However, this rationalization of the act as simply a preemptive move – as something one can joke about – naturalizes it and obscures the complexity of its manifestation as more or less acceptable sociotechnical practice. One thing that gets lost or smoothed over is how the experience of being ‘online’ relates to the virtual as discussed by Massumi and Shaviro. The unqualified intensity that accompanies the application is hard to describe with a term other than ‘potential’, the inevitability of surprise, its actualizations coming in the form of blinking application windows and new message alerts. As Massumi says about affect, this intensity is an incipience that veers off in different directions. Some thrive on it, effortlessly maintaining massive contact lists, while others sign off when they can. The intimate conversation intensifies; the excitement of flirting is extended in the pause between messages, as is the misery of argument. The dumbest joke is

suddenly fascinating and endlessly funny – LOL – while the otherwise profound statement becomes overbearing and banal. The point is that the specific form of interactivity and connectivity is a mediator, in one sense enabling interaction but also transforming it. But the point is also that, actually, nothing has to happen for interactivity to be affective. Virtual interaction, as in that which may or may not occur, already has an effect in the here and now: like a threat, it is “the future cause of a change in the present” (Massumi, 2005: 35).

In this sense, the instant messenger is really only the tip of the iceberg – consider the email notifier, the comments thread, the social networking site, the message board, the RSS feed, the trackbacks and referrals, the site stats, the blog and so on. Think of the compulsion to check all of these. Add the mobile phone, the digital camera and mp3 player. To avoid being labeled “specist” by the likes of Woolgar (1991: 90) I should also mention this is hardly limited to interaction between people, and add to the list the server crash, the download completion notice, the buffering video, the pop-up window, the automatic update, the 404 error message, the redirect, and all the other moments the machine becomes affective and more or less alive. Finally, consider the lack of all these things, or the paranoia that sets in after being (actually) away from the computer too long.

To study this side of interactivity, I think, is to be sensitive to effects. Making ‘away’ the new ‘online’ is a demonstrable misuse of technology – the user as zigzagging pilot, as ‘configuring’ – one that opens up a line of inquiry about an otherwise hidden process or affordance. A more famous misuse was of course the mass appropriation of SMS text messaging for mobile phones; elsewhere I suggested this should be interpreted in part as a reaction to the new experience of being ‘in touch’ all of the time (2006). It goes without saying that in both cases, the technological fix comes with its own set of problems. And one has to remain careful about instrumentalizing these misuses by assuming, after the fact, that they are the obvious effect of a certain cause. Nonetheless, the opportunity arises to bring a different perspective to, say, studying changing standards and software version histories. In what ways have different browsers, messenger clients, RSS readers and other types of software changed to incorporate past misuses? Other starting points for studying affectivity could be ‘naturalized anomalies’, strange practices that are taken for granted, or some of the newer ‘metaphors we live by’. For example, Anne Helmond (2007) points to the ‘vitalization’ of blogs through a ‘perceived freshness fetish’, resulting in the obligatory apology *to* the blog after a period of neglect.

But why should any of this receive treatment outside of, say, psychology or interpersonal communication studies? This brings back the question of politics and is why,

earlier, I used the loaded terms ‘precarity’ and ‘entanglement’ in describing the affect of virtuality. Precarity comes from the anti-globalization movement and refers to the endless array of part-time jobs, the lack of security and the otherwise uncertain and desperate realities that go hand in hand with policies aimed at creating a ‘flexible’ workforce. It is associated most strongly with pink-collar workers, or the service industry, and ‘the creative class’, young Information Technology workers on temporary contracts and with little job security; the two groups are also called “chain-workers” and “brain-workers” (GreenPepper 2004). Entanglement refers to what Noortje Marres (2007) calls ‘issue-entanglement’; she argues that the problems of the eco-home force us to rethink the energy network, and ‘networks’ more generally, as something constraining rather than liberating.

These terms, I think, will help to better understand the role of interactive technologies in producing the active citizen and the flexible worker. As was seen earlier, for Barry this relationship is about perceived autonomy, the conflation of leisure and work (by making the aims of good government pleasurable and desirable), and the absence of experts. Even in the most mundane material sense, interactive technologies, from the mobile phone to the search engine, are crucial to organizing and giving form to flexible labor – from the ability to schedule and coordinate service industry workers to the ability to work from home, etc. If Barry’s analysis reveals the discursive and material forms of interactive government, then I would add that it is the mediality of interactive technologies that modulates and maintains the appropriate affective disposition. The active citizen is continually activated; she is always already mobilized by the assuredness of the unexpected. The virtuality or excess of possibility that characterizes a precarious existence achieves ontological status in the machines that mediate our place in it. The anxiety of being ‘flexible’, of managing one’s participation in multiple worlds, is exacerbated by their multiple sites of contact, their virtual presence translating into actual affect. Away becomes the new online as soon as there is no longer a perceivable difference between the two.

To come full circle I should end with the claim, contra Andrejevic, that interactivity is in fact alive and well. The critical drive to show that interactivity will never *really* be offered to consumers keeps intact the notion that interactivity is enabling while its absence is disabling or controlling, and thus holds on to the fallacy of the excluded middle. As Galloway and Barry suggest, one should not think of interactivity as either/or, but as both/and. Rather than the pacification of interactivity, there is activation through it. There is the modulation of our capacity to be affected: raised a pitch here, lowered one there. While it is entirely possible to

take something positive from this understanding – for example seeing how it figures into the dedication to projects as Wikipedia and the open source movement – it is necessary to keep a wider scope.

The protocological drives toward transparency and connectivity continue after the Enemy Other and the Configured User, but with effects and affects theory is yet to account for. Considering the very likely possibility that designers have information that theorists lack, it seems at the least time to let go of the twin myths of the controlled user and the user empowered. Rather than the smoothness of relations of interpassivity, where the passive subject lets Google and the others act in her place, lets the machine do the work of being a subject, the interactive user is faced with multiplying potential. The removal of noise, through collaborative filtering or other means, does not pacify but amplifies: it means making every message count. The effect is less the elimination of suspense and surprise, more the maximization of resonance. But recognizing interactivity as resonance and activation need not precipitate the pacification of theory. Thus the suggestion here to seek the precarity and entanglement bound up in interactive technologies, in the configured interface connecting us with virtual insecurity made certain.

References

- Andrejevic, Mark (2001), 'The pacification of interactivity,' *M/C Reviews*, October 25. Available from <<http://www.media-culture.org.au/reviews/features/interactive/mandrejevic.html>> (accessed 7 July 2007).
- Barry, Andrew (2001), *Political Machines: Governing a Technological Society*, Athlone Press: London.
- Bigge, Ryan (2006), 'The cost of (anti-)social networks: Identity, agency and neo-luddites,' *First Monday*, 11(12). Available from <http://firstmonday.org/issues/issue11_12/bigge/index.html> (accessed 7 July 2007).
- Bogard, William (2000), 'Distraction and Digital Culture,' *Ctheory*: Available from <<http://ctheory.net/articles.aspx?id=131>> (accessed 7 July 2007).
- Carnegie International, 'Artists' bios: Carsten Höller.' <http://www.cmoa.org/international/the_exhibition/artist.asp?holler> (accessed 7 July 2007)
- Cramer, Florian (2005), 'Words Made Flesh: Code, Culture, Imagination,' Piet Zwart Institute: Rotterdam.
- Deleuze, Gilles (1992), 'Postscript on the Societies of Control,' *October* 59: 3-7.
- Fuller, Matthew (2005), *Media Ecologies: materialist energies in art and technoculture*, MIT Press: Cambridge, MA.
- Galison, Peter (1994), 'The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision,' in *Critical Inquiry*, 21: 228-266.
- Galloway, Alexander R., (2004), *Protocol: how control exists after decentralization*, MIT Press: Cambridge, MA.
- Genter, Don and Jakob Nielson (1996), 'The Anti-Mac Interface,' *ACM* 39(8). Available from <<http://acm.org/cacm/AUG96/antimac.htm>> (accessed 7 July 2007).
- Gibson, J. J. (1979), *The Ecological Approach to Visual Perception*, Houghton Mifflin Company: Boston.
- GreenPepper (2004), 'Precarity and n/european Identity: an interview with Alex Foti,' *Nettime*, October 6. Available from <<http://www.nettime.org/Lists-Archives/nettime-l-0410/msg00022.html>> (accessed 7 July 2007).
- Grove, Steve (2007), 'The CNN/YouTube debates,' *Official Google Blog*, June 14. Available from <<http://googleblog.blogspot.com/2007/06/cnnyoutube-debates.html>> (accessed 7 July 2007).
- Grusin, Richard (2007), 'Affect, Mediality, and Abu Ghraib,' Lecture delivered at the

- University of Amsterdam, Feb. 22.
- Harraway, Donna (1992), 'A Cyborg Manifesto: Science, Technology and Socialist-Feminism in the Late Twentieth Century,' in *Simians, Cyborgs and Women: The Reinvention of Nature*, Routledge, New York: 149-182.
- Hayles, N. Katherine (2005), *My Mother was a Computer: Digital Subjects and Literary Texts*, University of Chicago Press: Chicago.
- Helmond, Anne (2007), 'The Perceived Freshness Fetish,' Current Themes in New Media class paper, Media Studies, UvA. Available from <www.annehelmond.nl/wordpress/wp-content/uploads/2007/06/annehelmond_pff.pdf> (accessed 7 July 2007).
- Latour, Bruno (2005), *Reassembling the Social: An introduction to Actor-network Theory*, Oxford University Press: Oxford.
- (1991), 'Technology is society made durable,' in John Law (ed.), *A Sociology of Monsters: Essays on Power, Technology and Domination*, Routledge, London: 103-132.
- Marres, Noortje (2007), 'Green Homes and the Special Effect of Issue-Affectedness,' paper delivered at the New Network Theory conference, Amsterdam, June 30.
- Massumi, Brian (1995), 'The Autonomy of Affect,' *Cultural Critique*, 31: 83-109.
- (2005), 'Fear (The Spectrum Said),' *positions* 13(1): 31-48.
- Morley, David (2003), 'What's "Home" Got to Do with It?: Contradictory Dynamics in the Domestication of Technology and the Dislocation of Domesticity,' *European Journal of Cultural Studies* 6(4): 435-58.
- Morse, Margaret (1990), 'An Ontology of Everyday Distraction: The Freeway, the Mall, and Television,' in Patricia Mellencamp (ed.), *Logics of Television: Essays in Cultural Criticism*, Indiana University Press, Bloomington: 193-221.
- Norman, Donald (1999), 'Affordance, Conventions and Design,' *interactions*, May/June: 38-42.
- Rheingold, Howard and Eric Kluitenberg (2006), 'Mindful Disconnection: Counterpowering the Panopticon from the Inside,' *Open*, 11: 28-35.
- Rose, Nikolas (1999), *Powers of Freedom: Reframing Political Thought*. Cambridge University Press: Cambridge.
- Shaviri, Steven (2003), *Connected: or what it means to live in the network society*, University of Minnesota Press: Minneapolis.
- Stevenson, Michael (2006), 'Media Strategies for Surveillance and Control,' Databodies Research Internship Final Paper: Amsterdam.
- Thrift, Nigel (2004), 'Intensities of Feeling: Towards a Spatial Politics of Affect,' *Geogr.*

Ann., 86B(1): 57-78.

Vaidhyathan, Siva (2007), 'The Googlization of Everything,' paper delivered at the New Network Theory conference, Amsterdam, June 28.

Wiener, Norbert (1965 [1948]), *Cybernetics: or Control and Communication in the Animal and the Machine*, MIT Press: Cambridge, MA.

Woolgar, Steve (1991), 'Configuring the user: the case of usability trials,' in John Law (ed.), *A Sociology of Monsters*, Routledge, London: 57-100.

Zizek, Slavoj (2002), 'The Interpassive Subject,' *The Symptom* (3). Available from <<http://www.lacan.com/interpassf.htm>> (Accessed 7 July 2007).