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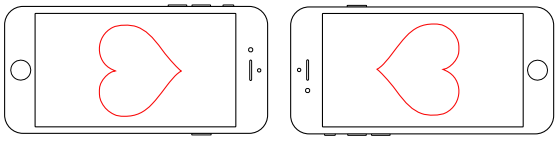

FCJ–184 Interpassive User: Complicity and the Returns of Cybernetics

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Svitlana Matviyenko
University of Western Ontario

Abstract:

This essay discusses the notions of "extension" and "prosthesis" as two different logics and modes of being with technology. I trace the two terms to the work of Marshall McLuhan, influenced by the work of Norbert Wiener and Buckminster Fuller. I argue that the logic of softwarisation (Manovich, 2013) is similar to the logic of extension, while the logic of appification (IDC, 2010) is similar to that of prosthesis. I argue that these logics also map onto the logics of metonymy and metaphor. I explain why such a distinction is useful for reading mobile apps and the computing practices they enable. I conclude by raising questions about users' complicity within the bio-technological cybernetic assemblage: What does the user of these technologies want? Is she able to confront her desire through their use? Why is the demanding swarm of parasitic 'media species', such as apps, so determined to get under the user's skin?

> *…cybernetics gets more and more complicated, makes a chain, then a network. Yet it is founded on the theft of information, quite a simple thing.*
>
> *Michel Serres, The Parasite (2007: 37).*

No boundaries

This essay explores the properties of mobile apps – and 'smart' technologies in general – that return us to the allegedly 'old' questions of governance and control raised by cybernetic theory. I argue that mobile apps are different from other software due to the role they play in transforming the configuration of actors in the human-machine assemblage. The significance of such radical reconfiguration is veiled by the discourses of 'innovation,' 'creativity,' 'sustainability,' 'productivity,' and 'transparency', which advocate the extensive use of cloud based technology for the sake of generating more data. This results in an environment where 'the body-across-platforms as the body with the data' becomes 'the body as the data it produces' [1]. The body-across-platforms acquires the property of programmability when the users 'actively participate in staging the scene of [their] own passive submission – and … view such participation as a form of power sharing' (Andrejevic, 2007: 15). Slavoj Žižek identifies this as a relation of "interpassivity" (1999: 102–124) – a forced pretense of being passive, while actually being frantically engaged in the production of data. In this context, I suggest that mobile apps as elements of cloud computing are a "media species" [2] unlike other software; they impose a kind of "totalitarian interactivity", as Lev Manovich described it in 1996, which manipulates users by imposing on them its demand for attention, dedication, and complicity to and with the machinic network 24/7.

The interpassive relation with technology is based on the logic of "prosthesis", which can be distinguished from the logic of "extension". They are different modalities or configurations of possibilities, impossibilities, contingences and necessities of being with technology. I argue that the distinction between these two logics and modalities, developed by Marshall McLuhan, whose theories of technology as "the extensions of man" was adapted by media theory, can be made explicit in the context of cybernetics, which conceives the two modalities as continuously and mutually transforming in how they work, in time, against any boundary whatsoever. And finally, I will explain why such a distinction is useful for reading mobile apps and the practices they enable for the production of the "data subject" (Bauman et al., 2014).

Networks of control

Researchers interested in exploring the boundaries between the technological and biological met and formed the Cybernetic Group at a series of meetings in New York City between 1946 and 1953. These meetings, called the Macy conferences, generally all had the same title and theme,'Cybernetics: Circular Causal and Feedback Mechanisms in Biological and Social Systems.' The conferences brought together a variety of scientists to explore such topics as information theory, analogies between organisms and machines, teleological mechanisms in society, collaboration between physics and psychology, intelligibility in speech communications, homeostasis and learning, decision theory, and many others. [3] The central focus of cybernetics as it emerged from these conferences was the study of processes within complex systems of servomechanisms, adaptive mechanisms, or automata, either 'in the metal or in the flesh' (Wiener, 1961: 42), that are capable of self-regulation by means of negative feedback in order to retain equilibrium. Through the long history of its developments, [4] cybernetic thought has conceived of self-regulating systems as 'coupled to the outside world both for the reception of impressions and for the performance of actions.' These systems 'contain sense organs, effectors, and the equivalent of a nervous system to integrate the transfer of information from one to another' (Wiener, 1961: 43).

Self-regulating systems cannot be thought without the notion of "network" that enables the feedback and transmission of information between automata and the environment or between different systems. In *What Is Cybernetics?* (1954), French topologist George T. Guilbaud, who was one of the first theorists to introduce the notion of "network" in the discussion of cybernetics, clarifies that the network of relations, or 'the pattern of interwoven connections,' has been of the primary concern for cyberneticians:

> *"Network" here is at once a metaphor and more than a metaphor. … In a system of cells or boxes interconnected by pathways, it is possible, as in the case of the simplest of schemas – family tree – that there may never be more than one way of going from one cell to another, so that in order to return to the starting-point we have to retrace our path. There are thus no closed circuits, and the "network" scarcely deserves the name. But as soon as the schema becomes more complicated, closed circuits (also termed "loops" or "meshes") make their appearance. The presence of such loops in the schema of a servomechanism is quite fundamental; it is from them that "reflex" and "reactive" structures are formed. (1961 [1954]: 15, 17)*

The notions of “feedback” and “communication” between self-regulating systems imply that these systems are networked. This complicates the understanding of boundaries between complex systems, which can now be thought of as either porous or imaginary. This is where a “network” is no longer simply a metaphorical figure of thought, but becomes a metonymical relation of systems that insists on their material contiguity (in space) and continuity (in time).

Such a model of a complex mesh or network materialised a decade later, in 1964, when American electrical engineer Paul Baran invented a packet switching technology designed for transmitting fragmented messages through the best available nodes of a distributed network. This distributed structure, different from centralised and decentralised networks, soon became a model for the ARPANET, the first large wide-area communication network established by the U.S. Department of Defence in 1969. This distributed structure of regulated communication expressed ‘a distinctly cybernetic notion of design’ (Pickering, 2011: 32). As Andrew Pickering explains, unlike the usual notion of design, which privileges theory and:

> *… entails the formulation of a plan which is then imposed upon matter … the cybernetic approach entails … a continuing interaction with materials, human and nonhuman, to explore what might be achieved – what one might call an evolutionary approach to design, that necessarily entails a degree of respect for the other. (2011: 32) [5]*

This decidedly optimistic description, however, does not deny the possibility of distributed control on the micro-level (which the notion of “regulation” implies) and, as such, cybernetics remains a way of subsuming ‘the other’ to the system.

Spatially, the cybernetic communicational network has spread, at first, through the United States and later, across the globe, gradually creating a smooth area of regulated communication through the micro-management of information flows. Luciana Parisi, in *Contagious Architecture*, provides an example of the subsumption of ‘the other’ by the system, noting that the neoliberal space is ‘defined by the (networking) movement of people,’

The space of the urban and the space of business thus become isomorphic, as they are mediated by an invariant function that establishes a topological connectedness driven by local interactions. It has been argued that this fusion between architectural space and

the space of the market – this "movement-space" that has joined them together into a decentralized neoliberal managing of subjectivity – only affirms "the generalization of the market form itself." In other words, contemporary architecture and design have been accused of adopting the philosophical and critical conceptions of space, and in particular the smooth space of control, to the operations of the neoliberal market, the ontological being of which has come to engulf all forms of aesthetics, culture, and technology. (2013: 160)

Temporally, the distributed structure of regulated communication has established a new relation between the past, present, and the future based on the idea of the recordable and retrievable past and of the pre-mediated (Grusin, 2010), predictable and pre-planned by our apps future – a smooth temporality of the now where we live a life 'on the record' that is ubiquitously stored by machines without our consent. As Rob Coley and Dean Lockwood write, capitalism 'deterriorializes, renders fluid, unleashes desire', 'but only to record, to regulate, to sort, sieve, anticipate and modulate [it] by virtue of the technology of control' (2012: 23). Christopher Nolan's film *Inception* (2010) about 'a team of professional corporate thieves' exploring the possibilities of 'extracting lucrative industrial information from their targets' subconscious minds as they sleep,' provides a potent metaphor for "cloud time": 'the inception of the future' (Coley and Lockwood, 2012: 3). This is George Orwell's *Nineteen Eighty-Four*: 'Who controls the past controls the future; who controls the present controls the past', with a new twist: … who controls the future controls the present.

Planetary traffic

Shortly after Baran's invention of the message transmission via a distributed network, 'man's movement [was linked] to his communication', [6] marking the 'move from a mechanical to an electronic environment' (Wigley, 2006: 385). As Mark Wigley (2006) points out in 'Network Fever', these topics became the subject of Greek architect Constantinos Doxiadis' annual Delos Symposia of Ekistics held on board his yacht New Hellas from the early 1960s until the mid 1970s. During these meetings, renowned architects, biologists, archaeologists, engineers, linguists, geneticists, psychologists, psychiatrists, anthropologists, along with musicians, literary scholars, historians and philosophers gathered to discuss the future of human dwelling. Doxiadis defined Ekistics as the study of a 'universal settlement' in the form of 'a worldwide city, threatened by its own torrential expansion' (1963). He believed such a city would be constituted by a constellation of the connected 'units of space', and, as such, would form a complex 'system of Networks, physical and managerial, by which our society operates' (Ekistics, 1969). The 'relationship of the units of space' would condition 'to a great extent the relationship

between people' (Ekistics, 1968) in that it would teach them to associate their need for connectedness with a certain technological design, be it a system of dwelling or a mobile network.

Rethinking the notion of a "network" of dwelling in terms of circulation and traffic actually began several decades prior to the Delos symposium, during the fourth Congrès internationaux d'architecture modern (CIAM) held in Moscow in 1933. The floating Delos symposium was modelled upon the CIAM, and picked up its concerns in the 1960s. It was McLuhan who took 'the CIAM argument in the direction of electronics' by announcing 'on the second morning of the first Delos boat trip that electronics presents new challenges to planners because this latest prosthetic extension of the body defines an entirely new form of space' (Wigley, 2006: 382, 383). In the setting of that floating conference, on July 6, 1963, McLuhan met his long time inspirational figure, from whom he borrowed the notion of "prosthetic extension," American neo-futuristic architect, inventor, and systems theorist Buckminster Fuller. In his illuminating discussion of the Delos conferences, Wigley describes this meeting of 'a short man in dark pants, close-fitting white jacket, crisp shirt, and tie with a tall man in light pants and a loose-fitting summer shirt covered with a geometric pattern' as the historic moment that began 'the radical confusion of architecture and networks' (2006: 377, 376). [7]

Both Fuller and McLuhan spoke of prosthetics in their work. McLuhan was influenced by Fuller's *Nine Chains to the Moon* (1938), in which Fuller described technology as an extension of the body and 'had been insisting that traditional architecture had to give way to a "world wide dwelling services network" modeled on the telephone network'. Here, he 'visualized global electronic networks long before they arrived' (Wigley, 2006: 376). Passionately engaged with the interdisciplinary discussions during the Delos symposium, McLuhan was eager to develop this notion of prosthetics even further. As Wigley writes,

> *...the boat became an amplifier for his argument that electronics is actually biological, an organic system with particular effects. The evolution of technology is the evolution of the human body. Networks of communication, like any technology, are prosthetic extensions of the body. They are new body parts and constitute a new organism, a new spatial system, a new architecture. This image of prosthetics – which McLuhan had first presented a year earlier in The Gutenberg Galaxy and was busy elaborating for Understanding Media: The Extensions of Man, which would launch him to superstardom when it came out a year later – was now reframed as an architectural image. (2006: 376)*

Indeed, in *Understanding Media*, McLuhan specifies the technological enhancement of various human capacities: he defines the written word as 'an eye for an ear', clothing as 'our extended skin', clocks as producing 'the scent of time', and the telegraph as 'the social hormone'. In the last chapter of the book he arrives at a cybernetic scenario of automation based on continuous exchanges between human and machine facilitated by their extensions. McLuhan explores the meanings of such relations, thereby expressing a non-static view of technology. Take, for example, the passage from his essay 'The Gadget Lover', where he writes:

> *Physiologically, man in the normal use of technology (or his variously extended body) is perpetually modified by it and in turn finds ever new ways of modifying his technology. Man becomes, as it were, the sex organ of the machine world, as the bee of the plant world, enabling it to fecundate and to evolve ever new forms. The machine world reciprocates man's love by expediting his wishes and desires, namely, in providing him with wealth. (McLuhan, 1995 [1964]: 46)*

This description seems more than apt today, when we constantly feed data to our machines that subsequently 'learn' our preferences, search our requests and 'memorise' the patterns of our online activity in order to improve their algorithmic responses and, thereby, pass as 'intuitive', 'intelligent' or simply, 'friendly' to their users.

McLuhan's vision of the technologically enhanced, or networked, user dovetails with the cybernetic conception of the world as a regulatory machine on a planetary scale. 'Because of this, cybernetics is often credited with inaugurating a particular historical relationship between subject and world,' Alexander Galloway writes; 'specifically, cybernetics refashions the world as a system and refashions the subject as an agent' (2014: 113). As we know, the agent in the cybernetic system does not need to be a human but can also be a machine or an animal. And it was cybernetic thought, with its notion of "cybernetic synthesis" that opened up the way to think of each of these 'agents' in terms of another. As David Mindell points out, the notion of "synthesis" is at the foundation of Wiener's theory of 'communication in the animal and the machine'. Wiener argued that 'human behavior and dynamic mechanisms operated according to similar principles' and, thereby 'posited the analogy between the digital computer … and the human nervous system', which he called 'a new science of feedback' (2002: 4). Within this new science, any kind of agent can be exploited, even a machine; the human agent, however, is not simply being exploited, deceived or manipulated, but overtly allows for such exploitation, deception and manipulation to happen by being complicit with the system, or systems, of intelligent machines.

Complicity across platforms

In the scholarship from media and technology studies to posthumanism, the line between "extension" and "prosthesis" has always been rather blurry and a clear distinction between them has never been made. In this essay I argue that the concepts of extension and prosthesis are two modalities of being with technology, and I use these concepts to highlight the difference between mobile apps and other software. At the same time, I suggest two parallel ways of distinguishing between these two modalities by reading the difference between them as the difference between 1.) metonymy and metaphor and 2.) surplus and lack.

	two parallel ways of differentiating	
modalities	1	2
extension (other software)	metonymy	surplus
prosthesis (mobile apps)	metaphor	lack
production	body-across-platforms	complicit subject

As I have suggested, the modalities of extension and prosthesis are logically different. The notion of extension is governed by the logic of metonymy that implies contiguity, but the logic of prosthesis is governed by the logic of metaphor. Metonymy and metaphor are both sustained by the law of substitution: while metonymy is a substitution of a part for a whole, metaphor is a substitution on the basis of resemblance.

This understanding allows us to speak about the production of the body-across-platforms that becomes a platform itself. As Marc Andreessen conceives it, a platform is 'a system that can be reprogrammed' and customised in order to adapt 'to countless needs and niches that the platform's original developers could not have possibly contemplated'. This implies its essential programmability: 'If you can program it, then it's a platform. If you can't, then it's not'. [8] The logic of "softwarization" (Manovich, 2013) is the logic of extension; while the logic of "appification" (IDC, 2010) [9] is that of prosthesis. The former is also the logic of metonymy and it implies contiguity as the adjacency of different entities; the latter is the logic of metaphor and it is based on the laws of discontinuity and substitution on the basis of resemblance. Yet neither the case of extension and prosthesis, nor that of softwarization and appification, constitute stable oppositions.

The modality of extension implies an 'addition' of something 'extra' in order to extend the body or enhance a certain physical or mental capacity. Extended, the body is 'more than itself.' Such a description could be quite problematic if we treat the body prior to extension as original or normal. However, the body is always in continuous transformation; it either absorbs or rejects, but only to absorb something else again. An 'original' form does not exist. The body is not insensitive to extensions or 'surpluses' however; addiction is a constant risk. From here we can make a connection with the psychopathology of the prosthesis that often accompanies the move from prosthesis as a surplus to this surplus' constitution of a lack. This is described in the psychoanalytic reading of the addiction to technology. As Luca Bosetti notes, 'the words "addiction" and "prosthesis" have a very similar meaning'. He continues:

> *Theorists of addiction point out that the term "addiction" comes from the Latin ad-dictum and is linked to the terms 'edicts' that originally designated a new law added to the juridical body, and then came to designate the juridical act that assigns a person or a thing to the will of another. Theorists of the posthuman, on the other hand, remind us that the term prosthesis comes from the Greek pro and thesis and literally also means 'addiction', although originally it had a grammatical, rather that medical, meaning in English and referred to the addition of a syllable at the beginning of a word and not to a replacement for a part of the body. Both addiction and prosthesis, therefore, refer to something that is added. Moreover, … these definitions show that prosthesis and addiction originally also both referred not – as they currently do – to something that is added to the body, but to something that is added to signification, to the signifier of the law in the case of addiction and to the signifier as such in the case of the grammatical prosthesis. (2010: 411)*

For the reasons such as these, there is often an absence of a clear distinction between the two modalities of being with technology – extension and prosthesis. Indeed there are constant reversals from one mode to another. This is not a coincidence and can be traced to the foundations of cybernetic thought. At the same time, the two terms are not interchangeable in the works of early cyberneticians but, rather, designate a certain degree of difference or alteration observable in the object, either due to processes of interaction with the outside world or to certain internal developments.

A user engaged with what is now a global network managed by 'smart' technologies often has her experience configured for her in the modality, on the one hand, of an extension; her devices are fashioned as useful and empowering additions, for example, when it comes to managing multiple daily tasks, organising a big research project, or maintaining social or

communal exchanges. On the other hand, this modality leads towards the modality of the prosthesis. It does so in further reification and alienation of users by leaving them no other option but the engagement with machines for the sake of data production which increases the virtualisation of labour. Today, it is a common knowledge that the performance of the human-machine 'collaboration' is only optimised when the relation between them tends towards the prosthetic modality. When the elements of the assemblage synchronise and merge, their systems become analogous and they enter the regime of co-dependency: when the matter is informational, as Patricia Clough insists, [10] both the information machine and the human find themselves in need of each other.

Here, alongside the production of the body-across-platforms, need constitutes the production of the complicit subject.[11] Both productions, the body-across-platforms and the complicit subject, are important for my discussion of the difference between softwarization and appification as a topological relation between the modalities of extension and prosthesis. The body-across-platforms is a volatile formation that is constantly being subjected to measurement and surveillance. The complicit subject is lodged in the inexistent realm between the surplus and the lack, always in never ending labour, re-producing itself as a gap.

Prosthetic extension

The two modalities are in the process of continuous transformation in how they work, in time, against any boundary whatsoever – just as such a transformative relation was conceived by cybernetics. Thus, the lack of the distinction between them is not a coincidence; it's a programmed omission. Let us look at Wiener. In the introduction to *Cybernetics*, he outlines the practical benefits of cybernetic ideas in different areas, and 'one of these is the matter of prosthesis for lost or paralyzed limbs' (Wiener, 1961: 25). He writes:

The loss of a segment of limb implies not only the loss of the purely passive support of the missing segment or its value as mechanical extension of the stump, and the loss of the contractile power of its muscles, but implies as well the loss of all cutaneous and kinesthetic sensations originating in it. The first two losses are what the artificial limb-maker now tries to replace. The third has so far been beyond his scope. (Wiener, 1961: 26).

Although it might seem that he uses both terms “prosthesis” and “extension” when referring to the same object, they designate different relations between the organic matter of the human body and the non-organic matter of the technological object. For Wiener, both prosthesis and extension are replacements or substitutions for loss. However, while an extension is a ‘passive’ or ‘mechanical’ support of the stump that may also have an aesthetic value and restore the imaginary consistency of the body, a prosthesis is cybernetic because it functions as ‘the replacement of lost senses’ (1961: 25). A cybernetic prosthesis is different to extension in that it merges with the organic tissue of the body and the nervous system by means of feedback; the information flow trespassing the boundaries of organic and non-organic matter. In this sense, although the prosthesis is still partly imaginary, it also presents the possibility for change or transgression of the imaginary body acquired at the ‘mirror stage,’ to use a Lacanian notion, which sometimes leads to original solutions for ‘virtualising’ and ‘remixing’ senses. Wiener writes: ‘The ideas of communication engineering have already been applied by McCullough to the problem of the replacement of lost senses,’ he writes, ‘in the construction of an instrument to enable the blind to read print by hearing’ (1961: 25). [12] With the cybernetic prosthesis when ‘data move across various kinds of interfaces, analogical relationships are the links that allow patterns to be preserved from one modality to another. As N. Katherine Hayles writes in *How We Became Posthuman*, ’(a)nalogy is thus constituted as a universal exchange system that allows data to move across boundaries’ (Hayles, 1999: 98).

It is in this analogical reasoning of cybernetics that we find the origins of McLuhan’s theory of extensions. In ‘The Phantom Captain,’ a short story from Fuller’s book *Nine Chains to the Moon*, which McLuhan held in his hands when he met the author on Doxiadis’ yacht, there are several passages that anybody familiar with even a ‘basic McLuhan’ might recognise immediately. In one of the passages, Fuller writes that it has ‘been but a step from false adornment and artificial surface extensions of the human body, in the matter of clothing, to shelter; and from shelter to the myriad of tools and instruments that were rationally evolved at an earlier time by [man] in the extension of his own mechanism’ (1963 [1938]: 25). In another he writes: ‘Holding the full significance of this thought in mind, one can suddenly comprehend, … that the automobiles … are extensions of their drivers, just as are the drivers’ hats, coats, shoes and faces; it is the progression of boxes within boxes of childhood play’ (Fuller, 1963 [1938]: 28). In another example, Fuller reaches an astonishing conclusion about the ‘extended man’, whose ‘inner spirit’ or ‘consciousness’ he describes in a Cartesian manner as ‘the phantom captain’: ‘The thrilling inference of the phantom captaincy conception is that it not only precludes the possibility of the operation of extended machinery without the volition of inner man,’ Fuller writes, ‘but that the unit mechanisms are doing for man what politics has consistently failed to accomplish’ (1963 [1938]: 28–29). Without such captaincy Fuller maintains, man disintegrates.

Thus, McLuhan's term "prosthetic extension" is not a mere collision of two modalities, but, rather, points to the moment of their synchronisation, the moment when they become analogues and contiguous, although only temporarily. For McLuhan, the "message" means the change of scale that occurs as a cascade, or 'the progression of boxes within boxes', such as when old media become the content of new media and so on. Should not the same logic apply to "extension" and "prosthesis"? Every extension eventually becomes prosthetic, as the self-regulating system circulates between a surplus (extension) and a lack (prosthesis). McLuhan's "prosthetic extension" does not just simply maintain the agent's ubiquitous connection or relation with a self-regulatory and self-referential system, but sets the system up itself. A "system", he says, is the entire assemblage: 1.) Narcissus 2.) mesmerised by 3.) his reflection in 4.) the water:

> *This extension of himself by mirror numbed his perceptions until he became the servomechanism of his own extended or repeated image. … He had adapted to his extension of himself and had become a closed system. … men at once become fascinated by any extension of themselves in any material other than themselves. (McLuhan, 1995 [1964]: 41)*

In other words, an extended man is the one who has locked himself out or, as McLuhan puts it, 'self-amputated' (1995: 42–43) from the world. Such a conception of a man and his extension is a reversal of Jacques Lacan's notion of the subject. For Lacan, the subject misrecognises a reflection in the mirror as the 'self,' which produces the split subject. In the words of Samo Tomšič, 'Prosthesis is the visibility of Splatung, the bodily split' (2012: 146); thus, the 'self' is a secondary imaginary creation that masks inconsistency and the split. For McLuhan, on the contrary, the 'self' seems to be initially present, but the engagement with media causes the substitution of the 'self' with an extension so that the 'self' gets detached or, 'amputated': 'the image produces a generalized numbness or shock that declines recognition. Self-amputation forbids self-recognition' (1995: 43). Despite the difference, both thinkers suggest technology traumatises, affects and deceives.

The human subject, a figure of recursion

When Jay David Bolter and Richard Grusin introduce the term "remediation", they also make a reference to McLuhan's notion of "extension" 'of the human sensorium' that 'can even be regarded as an anticipation of Donna Haraway's cyborg' (2000: 77) which, as above, also fulfils the logic of the prosthesis. Indeed, as I have argued above, if extension and prosthesis are two modalities of being with technology, they cannot be

simply opposed. Similarly, the cyborg and human cannot be simply opposed because these modalities co-exist topologically as two sides of one surface. Yet there are subtle differences between then. It is true that, over time, the cyborgian modality, when beset by misbalance and disturbance, strives for equilibrium by means of an extension that calms it down. Yet over time the prosthetic figure of the human constantly reemerges to unbalance the system all over again and to open it up for the next circuit towards change. McLuhan takes this on and suggests a move from cyborgisation (by an extension) to humanisation (by a prosthesis), not the other way around. This has to do with the recursive figure of human, or rather, the subject, from within the machinic self-regulating system.

It is true that McLuhan does not distinguish between the notions of "extension" and "prosthesis" because a distinction would imply an essential difference between the two, which he tries to avoid. Yet, especially in *Understanding Media*, he conceives "extension" and "prosthesis" as two different modalities, stages, or patterns of engagement with technology that differ both temporally and spatially. McLuhan's 'medium as the message' is his way of conceptualising the transition of the extension towards the prosthesis: 'What we are here … are the psychic and social consequences of the designs or pattern as they amplify or accelerate existing processes', he claims. 'For the "message" of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs' (1995: 8). 'The pressure of new burdens resulting from the acceleration by … media [is] the immediate oscillation of the extension or "amputation" of this function from our bodies', he writes (McLuhan, 1995: 42). A user 'embraces' the tool that substitutes a certain faculty or sense. This leads to a merging with technology or the production of a 'closed system' (McLuhan, 1995: 44). The 'closure' occurs where the extension turns into the prosthesis and, by oscillating between "human" and "cyborgian", produces the interpassive subject of the machine.

In *Technology and the Canadian Mind: Innis / McLuhan / Grant*, Arthur Kroker describes McLuhan as 'a technological humanist of the blood':

> *…his conviction, repeated time and again, was that if we are to recover a new human possibility it will not be "outside" the technological experience, but must, of necessity, be "inside" the field of technology. What is really wagered in the struggle between the opposing tendencies towards domination and freedom in technology is that which is most personal, and intimate, to each individual: the blinding or revivification of ordinary human perception. (2001: 64)*

I would only add to this incisive observation that McLuhan goes as far as to question the

very possibility of the '"outside" of the technological experience'. If the world has become one in which the environment is equated with a network as an assemblage of externalised senses or an infrastructure of the interconnected 'internet of things', then either way this world is sustained by complex relations materialised as flows of information. As Kroker explains McLuhan:

> *It is the human destiny in the modern age to be programmed by an information order which operates on the basis of algorithmic and digital logic, and which, far from conscious human intervention, continues to move through the whirring of its own servomechanisms. … By putting our physical bodies inside our extended nervous systems by means of electric media, we set up a dynamic by which all previous technologies that are mere extensions of hands and feet and teeth and bodily controls – all such extensions of our bodies, including cities – will be translated into information systems. (2001: 67)*

But what is this 'human destiny' if not the programmability of the body-across-platforms, the condition that Fuller describes in his 1938 essay (from which McLuhan's borrows the notion of "extension"): '[Man] may be likened to the variant of polarity dominance in our bipolar electric world which, when balanced and unit, vanishes as abstract unity of 1 and 0' (1963: 19). McLuhan's theory is often regarded as technologically deterministic (Williams, 1974), however, I agree with Kroker that McLuhan's view of technology is more complex and ambiguous than the constraints of determinism would allow. When McLuhan's work is taken in the context of wider cybernetic discourse, the human is configured as positive feedback, part of the machinic assemblage that drives it towards reproduction for the sake of change, not the preservation of the old forms (remember McLuhan's 'man becomes, as it were, the sex organ of the machine world, as the bee of the plant world, enabling it to fecundate and to evolve ever new form' [1995: 46]).

Here I return to the difference between softwarization and appification. I suggest that software is more likely to be associated with the mode of extension. Thus, mobile apps operate according to the logic of prosthesis, not only due to their constant presence as an addition to a user, available to serve 24/7 but because they inevitably transform into preemptive generators of needs. While the extension is an addition; the prosthesis is an addiction. [13] Given this, we need to differentiate between users' agency, i.e. as resistance or disobedience, and user activity facilitated by prosthetic technologies.

Reactionary activity

There is a way to argue that the agency the subject acquires in the cybernetic assemblage due to 'the production of singular subjectivities' is immediately taken away from her by 'the production of collective totalities' that absorb subjects: 'It acts out the fantasy of a Same that always manages to integrate the Other; as one cybernetician puts it, "all real integration is based on a prior differentiation"' (Tiqqun, 2001). This strategy is typical of neoliberal discourse; it interpolates subjects in such a way that everyone receives an "individualised" call for action, but, in reality, they are merely called to engage in the activity required of subjects by the system in order to sustain the system. Eugene Thacker makes a similar observation referring to the ideological deception in the time of ever "new" media: 'Activity is … not as grandiose as "agency," because this term carries with it all the baggage of being interpolated as a certain kind of subject' (2008: 98). Activity here is a mere reaction, and not agency. Cybernetically speaking, 'Gordon Pask called this "it-referenced" interaction, because the controlling system treats the other like an "it" – the system receiving the poke cannot prevent the poke in the first place' (Dubberly et al., 2009). Thacker also differentiates between 'activity' and 'action' outside of the cybernetic model, by opposing the two notions on the basis of their significance or weight: 'The action marks an event, while activity just sort of goes on;' and yet, he concludes, 'activity is not quite so progressive as "interactivity"' (2008: 98).

While the concept of interactivity seems a response to the inadequacy of the binary opposition activity/passivity, there is little theoretical consensus about its meaning. When mobile apps are regarded as "interactive tools," what first comes to mind is a robust feedback loop where human and technology supply each other with the information necessary to launch several different, yet, interdependent processes. At least at their current stage of development, most mobile apps are still rather simple programs, compared to other software that runs (on) our computers. However, as a swarm of small fragments of application software, each oriented towards a particular task, mobile apps constitute a complex synchronised system of harvesting data that exceeds a first-order cybernetic model.

There is an ambiguity about apps. After the user agrees to grant the app the access to personal information stored on a phone or a tablet, such as GPS location tracking, photos and media files, camera and microphone, and Wi-Fi connection information, the app, attached to the user as their information source, initiates a process of reading the data of the user, for whom it delivers a solution in accordance with the app's declared purpose or goal. The attraction of apps is related to the creative way in which they use the limited number of technological functions and properties of mobile platforms. In this sense,

most apps still remain imaginary. [14] Manovich is right to point out, with a reference to Althusser's concept of "interpellation", that interactivity is a myth, since 'interactive media' simply ask us 'to follow pre-programed, objectively existing associations', 'to identify with someone's else mental structure' by mistaking 'the structure of somebody's else mind for our own' (2001: 61). [15] As such, apps are meant to trick – either the system or the user. At their best, to employ the MIT's slang-term from the 1970s, they are witty hacks. At their worst, apps are parasites.

Parasitic passivity

'The system constructed here beginning with a production, temporarily placed in a black box, is parasitic in a cascade', Michel Serres writes. 'One parasite (static), in the sense that information theory uses the word, chases another, in the anthropological sense', and he continues: 'The parasited one parasites the parasites' (2007: 5, 6, 13). The notion of "parasite" and the "abuse value" it carries is Serres' way to substitute the binary of activity / passivity with his own subversive 'universal' couple of the terms "host" and "guest". Here, both words correspond to one French word, hôte, so that the two meanings are present simultaneously and shared by both notions – active 'eater of all' is also passive as 'eaten by all' (2007: 26). According to Serres, the abuse value is primary: it precedes any other kind of value. The abuse value is a secret of the cybernetic system, in which it is 'covered up' with the notions of exchange, communication, and equilibrium. The parasite always moves in one direction and trespasses different strata of organic and non-organic, material and immaterial. The parasite does not confiscate: it sneaks and steals to relieve itself of obligations to return or barter for what it grabs while crawling. The parasite is sustained by theft.

For Coley and Lockwood, this theft constitutes the production of 'the body of the multitude,' despite Michael Hardt and Antonio Negri's insistence that a 'living social flesh … is not a body' (2012: 52). It is this 'body of the multitude,' that the cloud turns into 'a technologically "smart" body, an intensified coalescence of a prosthetic, proximal body of nodal points'. The 'networked body of the social', being at the same time the host and the parasite, 'feeds off the monstrous body of capital while it, in turn, is nourished by that very body of the collective' (Coley and Lockwood, 2012: 52). For Matteo Pasquinelli, the figure of the 'immaterial parasite' within a distributed network refers to the system's hunt for material energy and economic surplus; it 'functions first as a spectacular device', he explains, 'simulating a fictional world, building a collaborative environment or simply providing communication channels, it accumulates energy through and in favour of its physical substratum' (2008: 672). It advocates and promotes user agency, but in reality

it facilitates a low key, ambivalent activity of 'sharing', 'liking', reposting, as ways of appreciating someone's expression passively by mindless somnambulant clicking across the network void. The growing numbers of app downloads just within the last four years – from 300,000 downloaded applications in 2010 to 76.5 billion downloads in 2014 – is a result of the IT industry's shift towards the so-called 'Third Platform', where the formerly independent forces of mobile computing, cloud computing, big data analytics and, of course, social media and networking now converge. [16] Apps are believed to perform the important task of managing our lives as personal organisers and interpersonal connectors. However, apps are part of the network infrastructure – especially with the arrival of the 'Third Platform,' the last interfacial layer between a user and the environment.

In his earlier reading of cyberspace, Slavoj Žižek discusses 'the strange phenomenon of interpassivity, a phenomenon that is the exact obverse of "interactivity" in the sense of being active through another subject who does the job for me' (1999: 104). The examples of such a phenomenon, he argues, do not necessarily belong to Internet culture, but can be found in different historical periods as well as in cultural and religious practices – from the Chorus in Greek tragedy to Akihiro Yokoi's and Aki Maita's Japanese digital pet-toy tamagochi to the Christian God the Father, whom Žižek describes as 'the ultimate tamagochi', produced by our unconscious and attacking us with endless requests and demands (1999: 108). Just like interactivity, Žižek argues, the notion of "interpassivity" subverts the standard opposition between activity and passivity, but in a twisted way: 'if in interactivity..., I am passive while being active through another, in interpassivity, I am active while being passive through another' (1999: 105). However, he emphasises that the interpassive "acting through" another masks the subject's activity by making it invisible to the outside observer: one may look passive or disengaged, whereas in reality, 'the subject is incessantly – frenetically even – active, while displacing on to another the fundamental passivity of his or her being' (Žižek, 1999: 106). In the end, users' 'frenetic activity' is a consequence and a symptom of what Geert Lovink (2011) defines as the 'psychopathology of information overload' – a condition describing the unstoppable urge to keep oneself 'in a loop' of constantly flowing updates, endlessly accumulating downloaded books, films and music, perpetually bookmarking numerous webpages instead of reading them – due to the lack of time and the pressure to keep up with the flow – and sharing them via social networks. These typical symptoms are far too familiar to nearly any user and are exploited within a 24/7 economy fuelled by user-generated content – and data-mined and appropriated by corporations.

The interpassive user defers both her labour and her enjoyment to the Other of the network; after all, the user is always left with nothing, and without a choice to opt out when it comes to networking and sharing. In the "programmed sociality" (Bucher, 2012) of the networked communities, 'the ultimate tamagochi' is a swarm of apps. Therefore, the notion

of “interpassivity” is not as harmless as it seems to Lovink (2012) and as it was, perhaps, in the original context of Žižek’s essay of the late 1990s where he spoke about ‘the delegation of passions and desires to others (the outsourcing of affect)’ at the beginning of the exploration of cyberspace’s frontiers.

Cynicism at the limits of enjoyment

In 2014, the high density of networked populations, and the scope of the algorithmization of sociality and cybernetic exploitation, combined with new economic models, force us to consider a different form of interpassivity. With Web 2.0, users’ interpassivity is now at the very core of the parasitic engagement with the network. As Franco ‘Bifo’ Berardi warns us, this leads to ‘the ultimate enslavement of human activity such as memory, language and so on’. The automation of cognitive activity by means of user friendly interfaces reduces complexity, and is nothing more than ‘the automation of passive connection’. [17]

Interpassivity operates according to the logic of a double deception in which the subject pretends to pretend: the user pretends to be passive by engaging in rather meaningless activity, avoiding acting or refusing agency, which inevitably requires the condition of another, less comfortable, passivity by stepping off the grid. The epistemological dimension of interpassivity does not concern knowing per se: it concerns a relation to knowledge, [18] in that it often takes the form of what Peter Sloterdijk has called the ‘enlightened false consciousness’ of modern cynicism (1987: 5).

> Their psychic apparatus has become elastic enough to incorporate as a survival factor a permanent doubt about their own activities. They know what they are doing, but they do it because, in the short run, the force of circumstances and the instinct for self-preservation are speaking the same language, and they are telling them that it has to be so. Others would do it anyway, perhaps worse. Thus, the new integrated cynicism even has the understandable feeling about itself of being a victim and of making sacrifices. (Sloterdijk, 1987: 5)

This new type of interpassivity of the user-subject is behind user’s complicity with the network-machine – even after Snowden’s revelations about the totality of the NSA’s surveillance. But then, what does ‘after’ mean? To quote Sloterdijk again,

Psychologically, present-day cynics can be understood as borderline melancholies, who can keep their symptoms of depression under control and can remain more or less able to work. Indeed, this is the essential point in modern cynicism: the ability of its bearers to work – in spite of anything that might happen, and especially, after anything that might happen. (Sloterdijk, 1987: 5)

Jussi Parikka is right to suggest that 'the "Post-NSA"-world implies the question of the Pre-NSA; Post-Snowden Leaks imply also the Pre-Snowden-Era;' [19] but indeed, where did it begin – in 2013 or, for example, with the publication of James Bamford's books about the NSA back in the 1980s? The first of these, *The Puzzle Palace: Inside the National Security Agency, America's Most Secret Intelligence Organization*, came out 1983 and caught the attention of Friedrich Kittler, who wrote a short review of Bamford's book entitled 'No Such Agency' published in 1986. Kittler concludes the review with the following:

> *With foresight, and while the rest of the world works according to John von Neumann's classical computer architecture, the NSA is already switching again: to optical computers, surface acoustic wave filters and CCDs or charged-coupled-devices, which guarantee more than a thousand trillion multiplications per second.*

This way, one day, those 99.9% of the data flow that still run past the NSA might become graspable and evaluable. (2014)

It matters whether we call Kittler's account a 'prediction' or a logical conclusion drawn from materials such as Bamford's book. It matters because the way we identify it reveals our relation to this knowledge of surveillance as either a staged unawareness or denial (if not a total foreclosure). In one of his essays for *The Guardian*, Žižek addresses the intolerable feeling caused by the disclosures of Snowden, Manning, and Assange. What makes it so unbearable, he speculates, is not that what they reveal is shocking news, but that this "non-news" is finally made public:

> *...we are facing the shameless cynicism of the representatives of the existing global order, who only imagine that they believe in their ideas of democracy, human rights etc. What happens in WikiLeaks disclosures is that the shame – theirs, and ours for tolerating such power over us – is made more shameful by publicising it. What we should be ashamed of is the worldwide process of the gradual narrowing of the space for what Kant called the "public use of reason." (Žižek, 2013)*

Here the knowledge itself is not as important as our relation to the knowledge. In Lacanian psychoanalysis, the relation to knowledge involves the question of pleasure, even extreme pleasure,* jouissance*, and therefore, it pertains to the question of a clinical structure.

Thus, another important question involves users' relation to the unbearable pleasures of non-stop networking. The latter produces the effect and affect of merging with the machinic Other of the network which, to employ Lacanian vocabulary, exhibits a tendency to transform from a law-giving paternal function to an affective maternal body – overwhelming, consuming, and granting access to unlimited *jouissance* (Bosetti, 2010).

Perverse panopticon

In 2010, three years after apps became part of everyday experience, media analysts, scholars, producers and users were still debating their significance and impact on computational practices. [20] That year, the International Data Corporation (IDC), the major market intelligence firm that provides advisory services for the information technology, telecommunications, and consumer technology markets, acknowledged in its annual report that 'one of the most striking impacts of the extraordinary growth and evolution of the mobile apps … has been the "appification" of broad categories of interactions and functions in both the physical and the digital worlds' (2010). Further, the report quotes Scott Ellison, vice president of the IDC's Mobile and Wireless research, who confirms the company's evaluation of apps' impact by using the earlier introduced neologism: 'Mobile app developers', he says, 'will "appify" just about every interaction you can think of in your physical and digital worlds' (IDC, 2010).

In *Software Takes Command*, Manovich offers us a new term, "softwarization", to describe the development and spread of 'media software' between 1960 and 2010. The term describes the state of things when 'creating cultural artifacts and interactive services which contain representations, ideas, beliefs, and aesthetic values,' 'accessing, appending, sharing, and remixing such artifacts', 'participating in the online information ecology by expressing preferences and adding metadata,' as well as 'communicating with other people' is done by means of software (Manovich, 2013: 23). Although Manovich does not distinguish between "appification" and "softwarization", by the end of the book, he locates apps in the global network of heterogeneous objects that the IDC identifies as 'the Third Platform':

None of the software apps and websites of the "social media era" function in isolation. Instead, they participate in the larger ecology, which includes search engines, recommendation engines, blogging systems, RSS feeds, and other web technologies; inexpensive consumer electronic devices for capturing and accessing media (digital cameras, mobile phones, music players, video players, digital photo frames, internet enabled TVs); and technologies that enable transfer of media between devices, people, and the web (storage devices, wireless technologies such as Wi-Fi and WiMax, and communication standards such as USB and 4G). Without this ecology most web services and mobile apps would not be possible. Therefore, this ecology needs to be taken into account in any discussion of social networks and their software – as well as consumer-level content access and media development software designed to work with web-based media sharing sites. (2013: 334)

It is not difficult to see how appification becomes the technique and expression of the cybernetic lifestyle. When any activity has an app for tracking it, the interpassive user has become a major actor of what Benjamin Bratton once called a 'reversed panopticon'. Unlike Jeremy Bentham's famous design of the greatest surveillance machine, where the subject is aware of the possibility of being the object of surveillance and, as a result, changes her behaviour by 'internalising the authority', the subject of the 'reversed panopticon' of the network is fully complicit with the governing machine despite the risks. This is an 'ideal user' who never stops performing for the gaze of the network, never stops clicking, never detaches from mobile gadgets.

Through the lens of Lacanian psychoanalysis, the 'reversed panopticon' is nothing less than the 'perverse panopticon' where the subject, as Bosetti suggests, strives to achieve a unity with the maternal body that promises direct access to unlimited *jouissance* (comments, 'likes' and many other continuous signs of simulated recognition, which are immensely more significant in the eyes of the user than those who 'like' and comment on that user's posts). The embrace by the network is perceived as similar to a merging with the maternal figure. To stay with the architectural model, think of the 'smart' or parametric architecture that Parisi sees as the arrival of the post-cybernetic mode of soft control based on an infallible prediction of the dweller's next move: not just the incretion of the future, but multiple futures, all at once.

For Lacan, a pervert structure (as any "structure" in the Lacanian understanding of the term) is not a problem, but rather, a solution to a problem that an individual invents in order to deal with the pain of existence (Swales, 2012: 54). In this case, the identification with the imaginary object of mOthers' desire gives himself or herself up completely to the mOther's enjoyment. This 'fantasy' of being the object of enjoyment ('they read me', 'they like me',

'they see me', 'they want me' – 24/7!) is a solution to not being able to give up or even limit one's enjoyment. Such inability is stimulated by the capitalist network. If *jouissance* is the kind of intense pleasure that hurts and kills you, to learn how to renounce the pleasure attached to the experience of being the networks' object of attention seems to be a key survival technique in the world of 'liliputian robots' that govern our lives.

I often think about some of the lost meanings and practices of solitude, of sensations of mild joy, and of a life that does not necessarily need to be happy and full, but is, in fact, lacking and can not only bear but actually treasure its own incompleteness. 'Today, only the person who no longer believes in a happy ending', Ernst Jünger wrote at the dawn of the cybernetic empire, 'only he who has consciously renounced it, is able to live' (2000: 207).

Biographical Note

Svitlana Matviyenko is a Lecturer at the University of Western Ontario. She has a PhD in Critical Theory, Media Theory and Psychoanalysis from the University of Missouri and she is now pursuing her second doctorate at the Centre for the Study of Theory and Criticism at Western. She writes on psychoanalysis, topology, posthumanism, mobile apps, and networking drive. Her work has been published and forthcoming in *Digital Creativity*, *(Re)-Turn: A Journal of Lacanian Studies*, *Harvard Ukrainian Studies*, *Krytyka* and others. Svitlana curated several experimental dance performances and several art exhibitions at the Ukrainian Institute of America in NYC, Museum | London (Ontario) and other venues. She is a co-editor (with Paul D. Miller) of *The Imaginary App* (MIT, 2014).

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Notes

[1] See my conversation with Patricia Clough and Alexander Galloway 'On Governance, Blackboxing, Measure, Body, Affect and Apps: A Conversation with Patricia Clough and Alexander R. Galloway', in this issue of *The Fiberculture Journal*. For more on "the body-across-platforms," see: Clough, Patricia. 'Feminist Theory: Bodies. Science and Technology', in Bryan S. Turner (ed.) *Routledge Handbook of Body Studies* (New York: Routledge, 2012), 94–105. Also, see this talk: 'Patricia Clough: Feminist Theory, Bodies and Technoscience', Bringing the Body Back in Humanities and Social Science, a conference by the Committee for the Study of Religion at the CUNY Graduate Center, February 24 (2012), https://vimeo.com/41526429.

[2] Lev Manovich's biological metaphor from his book *Software Takes Command* (2013).

[3] See: Dupuy, Jean-Pierre. *On the Origins of Cognitive Science. The Mechanization of the Mind*, trans. M. B. DeBevoise (Cambridge, Mass.: MIT Press, 2009) and Heims, Steve J. *The Cybernetics Group* (Cambridge, Mass.: MIT Press, 1991).

[4] This first-order cybernetics of Norbert Wiener, Claude Shannon, John von Neumann Arturo Rosenbleuth, and Warren Weaver was mostly focused on the practices of observation and control of self-regulating systems and the interaction of the variables within them. The second-order cybernetics of the late 1960s and 1970s associated with such thinkers and scientists as Heinz von Foerster, Herbert Brün, Humberto Maturana, Gordon Pask, Stafford Beer, and Erich Jantsch, shifted focus from the controlled to autonomous systems and to the interaction between the observer and the observed. Later developments of cybernetics, often referred as the third-order cybernetics, which N. Katherine Hayles sees as focused on 'virtuality and dates between 1985 and 1995 (Hayles, 2006: 161) explored the relations between the observers (Johannessen and Olaisen, 1993) and the mechanisms by which the observer and the system co-evolve together. As Vincent Kenny describes third-order cybernetics, it explores 'both the selfhood (subjectivity) of the observer and also the relationship of this subjectivity to any observed system (which can be in either the "external" or the "internal" worlds) – and questions any claims, tacit or explicit, relating to a privileged access to these worlds. The focus of a 3°C is necessarily on "foundationlessness" – of having nowhere to "stand" and also on the uncertainty and undecidability of what we may claim to "know."' See: Kenny, Vincent. '"There's Nothing Like the Real Thing": Revisiting the Need for a Third-Order Cybernetics.' *Constructivist Foundations* 4.2 (2009): 100–111, http://www.univie.ac.at/constructivism/

journal/4/2/100.kenny. Hayles also identifies the fourth order cybernetics after 1995 as 'the regime of computation': 'The characteristic dynamic of this formation is the penetration of computational processes not only into every aspect of biological, social, economic and political realms but also into the construction of reality itself, where "reality" should be understood, as Haraway says in a different context, as "made" but not necessarily "made up"' (Hayles, 2006: 161).

[5] We can also read such 'respect' as what is posited by such notions as "flat ontology" (DeLanda, 2002: 41) or "the democracy of objects" (Bryant, 2011) in the recent work of speculative philosophers.

[6] The title of the special issue of *Ekistics* (a journal dedicated to the science of human settlements defined by Constantinos Doxiadis) from May 1970 that discussed the 'move from a mechanical to an electronic environment.' The topic of the Delos conference that year, was 'From Man's Movements to His Communications' (Wigley , 2006: 385).

[7] Wigley mentions that this meeting, as enticing as it was for both thinkers, was not without some tension: ' [r] felt that his ideas, including the concept of the global village with which McLuhan would soon become famous, had been taken without acknowledgment. Yet a strong friendship was immediately established. This was greatly assisted by the fact that, as Fuller recalls it, McLuhan was carrying copies of his *Nine Chains to the Moon* (which had just been republished) and *No More Second Hand God* when they first met on the boat, declaring, "I am your disciple. … I have joined your conspiracy." McLuhan, who had denied getting the idea of prosthetic extension from anyone until he met Fuller, later told his friends that Fuller was too much a "linear" thinker. Fuller told his friends that McLuhan never had original ideas, nor claimed to. He simply remixed available material in an original way' (2006: 377–378).

[8] Quoted in Bogost, Ian and Nick Montfort. 'Platform Studies: Frequently Questioned Answers', *Digital Arts and Culture*, December 12–15 (Irvine, Calif., 2009), http://nickm.com/if/bogost_montfort_dac_2009.pdf.

[9] See: 'IDC Predicts 2014 Will Be a Year of Escalation, Consolidation, and Innovation as the Transition to IT's "3rd Platform" Accelerates', http://www.businesswire.com/news/home/20101213005128/en/IDC-Forecasts-Worldwide-Mobile-Applications-Revenues-Experience.

[10] See, for example, 'On Governance, Blackboxing, Measure, Body, Affect and Apps. A Conversation with Patricia Clough and Alexander R. Galloway'.

[11] The terms "complicit subject" is not ideal as it is a form of 'terminological stuttering', since this specific form of complicity as dependence is already a pure form of subjectivity, as I understand it. However, for the purposes of my discussion on the phenomenon on complicity, I keep this term phrase as it is.

[12] On the research on disability conducted by the Bell Labs and, later, the MIT, see Mills, Mara. 'On Disability and Cybernetics: Helen Keller, Norbert Wiener, and the Hearing Glove', *differences: A Journal of Feminist Cultural Studies* 22.2–3 (2011): 74–111.

[13] See Bosetti, Luca. 'Three Questions on Prosthetic Technology and A-(d)diction', *Paragraph* 33.3 (2010).

[14] See Eric Kluitenberg, 'Second Introduction to an Archaeology of Imaginary Media,' in Eric Kluitenberg (ed.) *Book of Imaginary Media: Excavating the Dream of the Ultimate Communication Medium* (NAi/De Balie, 2006), 5.

[15] In the earlier published version of this argument in 1996, in the essay 'On Totalitarian Interactivity,' Manovich even calls interactivity "totalitarian": 'interactive computer installations indeed represent an advanced form of audience manipulation, where the subject is put within a structure very similar to an experimental setup of a psychological laboratory or a high-tech torture chamber of CIA or KGB, the kind we saw frequently in spy films of the Cold War era' (1996). Also see Alexander Galloway's discussion of this essay in *The Interface Effect* (Cambridge, UK: Polity, 2012), 6–9.

[16] See Wikipeida entry on the 'Third Platform': https://en.wikipedia.org/wiki/Third_platform.

[17] Franco 'Bifo' Berardi's lecture 'Abstraction and Poetry in the Age of Financial Capitalism' at the University of Western Ontario on 29 November 2014.

[18] In a sense, the "cybernetic hypothesis" sank into today's discourse of "network freedom" that draws the attention away from the questions of surveillance and exploitation. In *From Counterculture to Cyberculture*, Fred Turner demonstrates how the transformative power of the "New Economy" and the potentials of the networked entrepreneurship were evident only to certain circles of those who envisioned and proclaimed cyberspace as the new "electronic frontier" of freedom (2008 [2006]: 7). Discussing the role of Stewart Brand, who allegedly coined the term "personal computer," and his crowd, Turner observes:

> *Although they rejected the military-industrial complex as a whole, as well as the political process that brought it into being, hippies from Manhattan to Haight-Ashbury read Norbert Wiener, Buckminster Fuller, and Marshall McLuhan. Through their writings, young Americans encountered a cybernetic vision of the world, one in which material reality could be imagined as an information system. To a generation that had grown up in a world beset by massive armies and by the threat of nuclear holocaust, the cybernetic notion of the globe as a single, interlinked patters of information was deeply comforting: in the invisible play of information, many thought they could see the possibility of global harmony. (Turner, 2008 [2006]: 5)*

[19] See Parikka's blog: http://jussiparikka.net/2014/07/23/echelon.

[10] See, for example, Chris Anderson and Michael Wolff, 'The Web is dead, long live the Internet,' *Wired*, August 2010 (http://www.wired.com). Also, Tim Berners-Lee, 'Long live the Web: A call for continued open standards and neutrality,' Scientific American, November 22, 2010 (http://www.scientificamerican.com).

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Apps and Affect. 61 likes. The Faculty of Information and Media Studies (FIMS) and the Centre for the Study of Theory and Criticism at Western University...Â Facebook is showing information to help you better understand the purpose of a Page. See actions taken by the people who manage and post content. Page created - May 25, 2013. People. 61 likes. 25 Apps for Busy Moms â€” Because a Little Tech Can Go a Long Way. Let's face it, technological advances over the past couple decades have made our lives seriously cushy compared to, say, the late 1800s. But said technological advances have also made our lives incredibly fast-paced â€” and if you're a mom, it kinda feels like your on turbo-speed 24 hours a day, 7 days a week.Â 'Collect it All' This was a brilliant piece by them and they brought the real issue to the front. It has been washed over and pushed aside focusing on Snowden, and trying to frame it as a security issue.Â But how students are using their devices, how technology is affecting their educational experience, and what effect it has on their well-being are questions that are harder to answer. Internet. Social Media. Inappropriate affect can be a feature of a variety of different mental health conditions. Learn more about this issue and how to cope.Â Affect refers to the outward expression of a person's internal emotions. For most people, there is congruence between affect and circumstance; for example, if you are given the news that a friend has passed away, your reaction would be sadness and tears. However, for a certain percentage of the population, outward affect does not match the situation that they are in. This is known as inappropriate affect and can have a variety of causes. If you know someone who smiles during a tragedy or who does not show emotion when it would be expected, they may be experiencing inappropriate affect. nx affected:apps --plain should display list of affected apps. we use this comma separated list of affected apps to determine what apps to deploy. What is the current behavior? No.Â andrebraghini commented Feb 25, 2020 â€¢. edited. @DedoxBR I resolved this by replacing above command with nx affected:apps --base=origin/master --head=origin/master --plain Ref: @whimzyLive it didn't work for me.Â So I encountered this issue in Github Actions and after some debugging I have found the following: By default Github Actions checkout action only pulls the latest commit in a detached head state. I have found this causes any git operation for comparison to break. Affect and effect are easy to mix up. In most cases, â€œaffectâ€ is used as a verb and â€œeffectâ€ is used as a noun. But donâ€™t let the exceptions trip you up.Â To avoid ecological issues, scientists and governing agencies consider how sustainable development affects the environment and its place in deciding future environmental issues. (Bright Hub, â€œSustainable Development for Affecting Environments Positivelyâ€). And we could do nothing to help them; Dunham was crying quietly beside me, and all the men were affected by the piteous cries. (John Keegan, The First World War). Note that in that last example, the men are â€œaffectedâ€ because they are changed by the disturbing events of war, but that this change has an emotional factor, too.