Glitch

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Cultural Politics 13(1), March 2017

Abstract

Glitches, formally artifacts of errors in electronic transmission like CD stutters or dead pixels, interrupt communication and distract audiences without wrecking the systems they occur in. Permanent irritants, they operate as irruptions of difference into the indifferent flux of commodity exchange. They reveal the exclusions, notably of noise, that enable rational communication, and the underpinning dependence of ostensibly unique items in semantic chains on their mutual indifference. Glitches are symbols whose non-human labor reveals the limits of humanism.

Keywords: Glitch, media, technology, labor

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The word 'glitch' refers to any form of electronic interference, especially those that become audible or visible in transmission. According to the Oxford English Dictionary, the word appeared for the first time in the 1960s as astronaut slang for a sudden surge in current. Electro-magnetic media have always been susceptible to electric pulses and magnetic fields, often coming from the equipment they have been produced, stored or played back on: the term swiftly permeated the world of electronic as well as electrical engineering so thoroughly that now, in everyday English, a 'glitch' is any accident that is trivial enough to be overcome. A glitch in any kind of system creates minor disturbances without actually damaging its major functioning. Glitches do not stop transmission: they merely make it scrappy, dirty or noisy. In media, the word can be used in both digital and analogue electronic media, and by extension to describe dust and scratches on a film, stains on a cinema screen, or an imperfection in a lens. Most writing on glitches comes from electronic engineers seeking ways to remedy them. Many artists, among them noted net.artists Jodi and glitch artist Rosa Menkmann, quite to the contrary, have embraced glitches to create new visual and sonic forms from electronic media's capacity for creating and navigating their way past interruptions in their material substrates.

Given its first usage, the word 'glitch' should properly be limited to electronics. However, it can be heard in post-1960s discussions of the technical media that arrived in the 19th century – photography, telegraphy, cinema – and to earlier printing and printmaking technologies. Its modernity is key to its function. Perfection had certain qualities in earlier epochs that no longer hold of modernist media. Thus the ornamental friezes and ceilings of the great mosques always incorporated a single flaw, since perfection was God's prerogative. At the pinnacle of mediaeval Gothic, the cathedral of Chartres, built in a single generation under the guidance of a single vision, approximates that perfection which in Islamic architecture was blasphemous, but for very much the same theological reason. There is then an archeology of the imperfection, but it is in the technical media that it first emerges not as intention but as artifact of the materiality of the medium. Ink bubbles disturb the careful composition of darkness in intaglio printing, even after they were drafted in as the basis for later techniques like aquatint.

Glitch is the evidence that control is never complete. Completion, perfection and control only go together in this sealed triad under conditions of modernity. The glitch comes as a small revenge, a tactical revolt of the material against its organization, of materiality against intent. Where control belongs to the perfection of mastery, glitch belongs to the decolonial. As such, it is at once a material event and a moment in which the possession of subjectivity is in question. An artwork or indeed any communication typically establishes its source as in some way human, whether imaginary, fictional or determinate, and whether posed as equal, as dependent or as authoritative. The glitch indicates an other subject in the medium, the ghost in the machine, the inhuman in our communications. Of this subjectivity Ashis Nandy writes

> while the economic, political and moral results of colonialism have been discussed, its emotional and cognitive costs have been ignored. And as Freud has reminded us in this century, what we choose to forget has a tendency to come back and haunt us in 'history' (Nandy 1983: 71)

One of Nandy's great insights into the colonial subject formation is that while it oppresses the colonized, in the manner so passionately captured in Fanon, it represses the colonist, the key example of whom in Nandy's account is Rudyard Kipling, condemned to repress 'the other Orient . . . as archetype and as potential' (Nandy 1983: 71-2), construing Asia as orient precisely in order to identify, externalize, and demean the otherwise universal possibilities of a polytheistic, multicultural androgyny. In order to produce the ordered, unified, commanding persona of colonial rulers, Kipling and his peers learned to submerge themselves.

Nandy's appeal to Freudian repression is no longer fashionable, it is tempting to suggest, because the neo-liberal subject that has supplanted both colonial and anti-colonial subjects, the latter as Nandy argues formed in the mirror of the former, can now claim a universality only in preparation under the British Raj. That universality, whose intellectual roots lie in the German idealist tradition which gave to modernity as reason and freedom its greatest expression, and in which the suppression of individuality under the sign of the universal subject found its most sweeping and profound expression, denies the possibility of internal contradiction, let alone rupture and failure. For Freud, subjectivity is an always incomplete project.

Contrast, some hundred years earlier, Hegel's thesis of 'the *cunning of Reason* – that it sets the

passions to work for itself, while that through which it develops itself pays the penalty and suffers the loss' (Hegel 1953: 44). The 'that through which it develops itself' is of course human lives. Each of us suffers and dies, so that Reason can pursue its own self-development. Each of us must feel our passions set aflame so that cool Reason can motor calmly into its future. We individuals will be consumed, and the future will not come back to rescue or justify our sad existence, save as necessary sacrifice in which even our virtues played no more part than cogs in clockwork. If Hegel was the scientist of this modern subject, the English public schools were its laboratory, and the Raj its application. Today we witness its democratization, as the instrumental rationality of perfectly informed purchasers in a perfectly equitable exchange constituting a universal Subject of history in the Market whose self-sufficient Reason trumps all individual misery.

The Market as pure Reason depends upon perfect communication. Financialization, which no longer requires material grounds but only faith in their indefinitely postponed existence (the 'confidence' of investors), reveals the increasingly communicative nature of the economy. The Subject of market communication is however not the investors but the Market itself: investor confidence is a mere semantic epiphenomenon, just as individual investors' losses and gains are evened out in the cunning of the Market. The 'emotional and cognitive costs' of marketisation have not been entirely ignored, as under colonialism, because they are now operationalized as raw materials for the reproduction of a capital which, having completed its geographical expansion, now expands to colonize the minds and bodies of its inhabitants. Whether as consumers of therapies and pharmaceuticals, or as the necessarily damaged creatives who feed the maw of fashion, the production of unhappiness is as integral to the reproduction of capital as is the production of waste.

In such perfect communication, reversing the belief of the Islamic architects, any interruption is blasphemy. Where the world is constituted as the self-realization of the Market, any other goal, desire, tendency or indeed any accident to the contrary is not only illicit but both shameful and doomed to failure, since no other can exist that is not the perfection of the Market. In the grand sum of things, this hideous dogma is the reason why one should undertake to follow the affordances of glitch aesthetics, for in the glitch there emerges what from the point of view of this now dominant Subject of history must be that unthinkable thing, evidence of an other. What is so deeply blasphemous about this evidence is that where there

is even one in excess of The One, there is no way to stop the proliferation of others. The pure unity of perfect communication demands, therefore, its unconscious. The unconscious of perfect communication is the glitch.

No-one should however therefore embrace the unconscious as a good in and of itself. It is a symptom of repression, and to that extent determined by the existence of unity. Glitch aesthetics is only the verso of a perfect recto, the obverse of the One. Its evidence is of unhappiness, that which 'pays the penalty and suffers the loss'.

At the same time, the existence of a multiplicity parallel to the unity of the Market, a multiplicity not reducible to its singular density, proposes itself as noise, opposed to the negentropic signal of smoothly-running communicative perfection. We may think of this noise as the primal mediation from which communication must bootstrap itself. Electromagnetic noise fills the radio spectrum, with everything from cosmic radiation's echoes of the Big Bang to the ephemeral crackle of lightning. As Douglas Kahn (2013: 1) asserts, 'Radio existed long before it was invented'. The communicational function of radio depended on the prior existence of uncontrolled static, whistlers and other phenomena of the radio spectrum before human broadcasts. We may therefore understand glitches as epiphenomena of the material substrate of electronic transmission, and by extension understand the priority of dust, for example, over film that struggles so hard to exclude it, and encourages its audiences to ignore it when it does appear. Glitch, in this perspective belongs to the pre-human, inhuman universe against which we drag our messages into existence, and against which we strive to retain their integrity. This noise can then be seen both as primeval nature and as the entropy that threatens every act of order, every emergence of life, insofar as life is negentropic, striving against chaos, gathering materials and energy to protect itself from dissolution. This certainly was the standpoint of the first cyberneticists like John von Neuman. At the same time, as Michel Serres (1982) argues, without this ground of random and non-human a-signifying, signification itself cannot take place. Not simply a raw material transformed into communication, Serres' noisy 'parasite' is no leach sucking the life of order, but the fabric on which meaning embroiders its patterns. As Mary Douglas argues, order gives the world meaning by giving it structure:

> As we know it, dirt is essentially disorder. There is no such thing as absolute dirt: it exists in the eye of the beholder . . . Dirt offends against

> order. Eliminating it is not a negative movement, but a positive effort to organise the environment (Douglas 1966: 2).

Meaning constructs itself by distinguishing itself from the dirty, noisy world around it, which it ejects as mere environs, mere externality. This process is curiously doubled. In a first movement, as Elinor Carmi argues, the cybernetic efficiencies set out in Bell Telephone's post WWII move to automated switchboards 'was achieved by disciplining and managing women and then driving them out of the workforce. Their noise became silenced by automatic machines' (Carmi 2015: 11). Yet as she also argues, the ejection of noisy women from the circuit was preceded by the integration of their bodies into it, under hybrid Taylorist-biopolitical regimes mixing internalized discipline with the integration of switchboard operators' bodies into the operation of the system. Like the 'natural' environment, economic externalities are presumed by the system that exploits them while at the same time excluded from the accounts, fiscal and descriptive, the system gives of itself. Thus noise as primal asignifying material is both subsumed and rendered of no account.

Glitches therefore need to be acknowledged as liminal events, thresholds between internal and external, like the women's bodies first disciplined and then ejected, only because they had by then been assimilated, as operational procedures, into the functioning of an asexual and to that extent presumedly noiseless operation. The glitch then is not so much the repressed of gender as it is the emergence of a polysexuality doubly excluded, first by the construction of femininity and then by its neutering. More damaging still, this polymorphous perversity is no longer even identifiable as infantile: it is instead primordial, not chronologically but pervasively: the irreducible accompaniment to the production of communicative order.

Noise thus emerges as historical concept at the end of a social formation that knew only sound, by which I mean sonic material that was ultimately semantic. Prior to the development of large-scale machinery, sound was indeed, as Christian Metz (1980) had it of cinematic 'aural objects', the sound *of* something: the mediaeval soundscape was composed of human activities, animals, trees and rivers, meteorological and, more rarely, geological events. The harmonies of nature or discords of war, the calls of the spirit or of sovereigns formed the sonic without a concept of noise, which had to be invented as a category of thought and hearing. Thus primordial noise is also a historical discovery, a new way to categorize

experience, and a new ontology which, however, makes possible the thought of a non-human, unexperienced reality that has always been there, but never before sensed or named. The semantic universe of the Middle Ages, even at its most dogmatic, was always open to miracles, the unassimilable new. Primordial mediation only begins to be heard as noise in the arithmetic configuration of scientific rationalism after Galileo.

Observing that 'Modern scientific technologies tend to work toward eliminating accidents', Masakai Fujihata (2014) has written that 'Complete control requires anticipating and preventing the unexpected, thus precluding any element of discovery or surprise. But for humans to remain creative, we cannot do without the stimuli of the unexpected—which is ultimately what leads us to scientific curiosity in the first place'. The programming of the unexpected is however already contradictory, since, as Manon and Temkin (2011) point out, 'from the point of view of the file, whose genetic predispositions are rigid and fixed, there is nothing random about glitching. "Open 57904.jpg >> replace all Q with 9hJ" produces exactly the same results every time. Alternately, we could say that glitch practice is pseudo-aleatory, since results which appear random are in fact entirely reproducible'. Noise, once discovered, can be generated as well as revealed. Thus the glitch operates both as a proof of the limitations of communication and at the same time as a quality of communication. In feature films, this contradiction appears as the paradoxical evidence of the truly mediated status of fictional interchanges. In Tony Scott's *Déjà Vu* (2006) for example, glitches mark scenes in the 'real' fictional world off from the 'unreal' past that a fictitious medium allows the protagonists to view. Like the Adobe Photoshop lens flare filter, which produces the illusion of a real lens in an unreal image, glitches have become the hallmark of a fictional mediation within a fictional diegesis. The doubling of the mediation produces an effect of authenticity, like the mimicking of long-lens camera snooping in *Citizen Kane* (1941) that Garret Stewart (2007: 51) refers to as 'authentication by disrepair', or those ubiquitous gunsight and binocular masks in westerns and thrillers. Here the extra layer of mediation mimics a primary mediation, part of whose effect is to mask the real primary mediation: we never notice the black area surrounding the gunsight, only the gunsight itself. Other modes of additional mediation mimic subjective states (double printing for example) again without encoding for reflection on the medium itself. Double-printing, vignettes, filters and self-conscious mimicry of other genres are frequently deployed in avant-garde film, but there it is the occasion – the event of an avant-garde screening – that encodes for the reflexive, quite as much as the film techniques themselves.

It may be that to extend definitions of glitch backward to such pre-electronic forms is to defuse the specificity of the trope. Yet the accumulation of dust and scratches on showprints and even on archive prints is in many respects part of their aesthetic. There is a possibly apocryphal tale of John Cage, who had initially been scathing about Paik's *Zen for Film*, comprised of clear blank leader, declaring it 'much improved' on seeing it on its return to New York from a tour damaged by its handling and projection. We imagine that Cage approved the evidence of existence, the specificity of this particular print rather than any other, the witnessing of the world far more deeply inscribed than any photographic image. In this sense we can learn from this moment in Fluxus that the electronic glitch matters because it is matter. Analogue video glitches are preeminently artifacts of the machinery of recording and editing. They are evidence of the handling of the tape, of its physical passage through moments of history, and in the case of some glitches (comet tails from tube cameras, horizontal marks traversing the image) marks of moments of recording and of playback. Disintegration of the image is evidence of the integrity of the tape itself as inhabitant of history.

The deliberate production of glitches is perhaps a different matter. Analog video synthesizers like the Rutt-Etra in the hands of Woody and Steina Vasulka, or the Image Processor built by Dan Sandin and Phil Morton already produced the kind of predictable glitching of video signals that Manon and Temkin are concerned about. This kind of 'experimental' media, in which the experiments are conducted in public, would include also the slit-scan technique developed by Douglas Trumbull for *2001* (1968) and many effects undertaken for mainstream film. They are in this instance no longer either instances of technical irruptions from within the operating systems, hardware and software of machines, nor of either ontological or communicative noise, but of labor.

Rosa Menkman (2010) distinguishes 'hot' and 'cool' variants of glitch as deliberate labor on the image. A hot glitch focuses on producing an end product which satisfies some aesthetic criteria: she gives the example of Nabil Elderkin's 2009 video for Kanye West's *Welcome to Heartbreak*. Cool glitch is a process, an exploration. The taxonomy sits on top of an older one that distinguishes intentional from accidental, where the intentional is ultimately

instrumental while the accidental involves at the very least a share of creativity taken up by either natural processes or technologies or both. The instrumental, 'hot' glitch, with its restriction to the human, is a work in which work itself is evaporated, subsumed into intention, while excluding also the labor of the technology (Marx's 'dead labor') and of natural processes, here electricity and the electro-magnetic spectrum.

In Andrew Norman Wilson's photographic series *ScanOps* (2012) which reproduces images from Google Books' vast number of scans, the gloved fingers of scan operators appear in frame, evidence of repressed human labor captured in the massive technological apparatus creating the world's largest library, a process which echoes various forms of errors, including images of animators' and technicians' hands in carefully observed cartoons. As Hannah Frank writes, 'The disturbing presence of scratches, stains, and grain—or are they pen strokes, paint splotches, dust specks?—do not occlude the object but instead reveal the nexus of social, technological, and economic practices that is the photographic apparatus.' (Frank 2016). The surface of a physical photograph is vulnerable to the grease on fingertips, its meniscus marked with the identity of those who have touched it. A digital image pretends to absolute autonomy from its making and its passage through time. By excluding itself from history and divorcing itself from life, it aspires to the purity of a wholly rational existence. But if it were possible for digital images truly to separate themselves so absolutely from time, they would be empty. This is indeed a possibility: that they persist not as images but as code, but in that case they are dependent on specific software for their display. Glitch denies to digital artifacts the autonomy that would destroy them. [1]This contradiction between autonomy and

1 At the same, as pure code, the digital image places itself in the domain of the absolute, to the extent that, under the terms of digital rationalism, nature has become data. In this moment, the image disavows its phenomenal form in order to become purely arithmetic. As numerical matrix, it replaces meaning with pattern, that is with an aesthetic no longer dependent on human interpretation but *sui generis*, by which should be understood both that it is of its own kind, autonomous of human knowing and, etymologically, that it is a self-generating, automatic reflection of the essentially numeric structure of scientific measurement. This intrinsically invisible but also insensibly numerical absolute takes, for technological and more specifically digital rationalism the place of the void in, for example, the thought of Nishida (e.g. 1990). This void teeming with numerical and algorithmic auto-generative process is both *nihil* in that it has no being either in itself or for others, and at the same time *plenum* in that nothing else can co-exist with it. The necessarily iterative operation of natural laws in their algebraic form and the limited symbol set it draws on means that the wild processes are in themselves profoundly repetitive, and thus meaningless not only in the exclusion of semantic humanism but in relation to the death instinct. As intimated below, the mechanical repetition of factory discipline and its organization of labor as abstract simple labor power as exchange value align with repetition as symptom of *thanatos*. The arithmetic model of the universe in technological rationality is then structurally homologous with the formal properties of neoliberalism. Thus the more closely the data image approximates to pure abstraction, the more profoundly it becomes dependent on a specific social and political culture and its formal signature.

dependence is however not resolvable in a synthesis in which freedom is necessity. Rather the two co-exist in the mutual antagonism expressed in glitches. Frank's assemblage of practices constantly threatens the progress of digital rationalism towards nothingness through a glitch that turns them into sites in which they work and are worked upon by human, non-human and no-longer-human labor.

Since the technical media, from clockwork to Herzian clock functions, rely on repetition, they congeal in their particular assemblage of dead labor the repetitions of natural laws, of factory discipline and of the death instinct; while, in Shannon and Weaver's proto-cybernetic theory of communication, repetition is a form of noise and hence of entropy. Thus the model of the archive as site of eternal repetition of the same allies itself with a necessarily noise-generating and entropic system which, to that extent, excludes the human from its ideal operation. This is why the work of the archive always interrupts pure repetition. Glitches disallow any purity of repetition, which would erase time from the equation of one repetition with another, because whether they arise at the moment of representation, of storage or of transmission, glitches are always temporal phenomena. Against the indifference of repetition they assert 'the difference that makes a difference in a later state of affairs' by which Bateson defines information. Moreover, glitches, whatever their provenance, are also phenomena perceptible to the three phyla, human, machinic and natural.

In this they differ from nature as it exists now for technical purposes. The history of nature as concept might be boldly figured as transition from commons, by exclusion, to wilderness; and from wilderness, by expropriation, to raw material. In our times these strata persist under a new layer, in which the raw material has acquired the characteristics of data. If on the one hand contemporary environmentalism strives to recover the polytheist and pantheist relations typical of the oldest strata, nature as data is the object of a struggle to deliver nature from the monotheism of the industrial phase when nature was raw material and inert, and seen optimistically, to move towards a secular relation in which nature has a voice of its own. However, the model that has grown most organically from the earlier strata is one of natural communication, rather than mediation. As communication, the data of nature is read only as sending, via discrete channels, discrete messages. It is as if in face-to-face communication the only information was the words spoken, but not the tone of voice, the facial expressions or

gestures, the multiple interactions with the interlocutor, and all the cultural formations of the individuals and the event – location, timing, gender, age and race, styles of clothing, acoustics . . . everything, in fact, that allows mediation to occur through many channels and with multiple connotations affecting both partners in conversation and, in many instances, accumulating, in the place where the conversation happens, to produce that sense of place we encounter intuitively in sites of long inhabitance and significance like churches, of which Augé (1995) has written so eloquently in the opening pages of *Non-Places*. Stripped of their materiality and reduced to words, human interactions lose their complexity. It is such purely symbolic, abstracted forms of communication that are gathered by cookies and other technologies mapping online behaviors. The becoming-data of nature in digital reason[2] strips it back to numerical symbols. The pattern-seeking predisposition of digital reason leads, in a second stage, towards averaging out the exceptional, which is excluded from communication under the label of noise. As a general rule glitches can only work on this second operation, reasserting the numerically exceptional[3] in order to reveal the normative techniques of domination, but without being able to crack open or sabotage the arithmeticization on which it is founded. To the extent that it concerns only the recording of the numerical measure of phenomena, not the phenomena themselves, the statistical functioning of digital reason is invisible unless actively visualized, unheard unless sonified.

This is why the perceptible nature of audio and video glitches is in the end more significant than simply as punctuations of norms. Their liminality operates between the smoothed and insensible operation of numerical code and the eruption of code into sensation. Not itself a site of meaning, the glitch exposes the lack of meaning underneath the manipulated symbols constituting not only digital presentations (films, images, music . . .) but of the world, the human, technical and natural environments, as constituted in the form of pure data. Nor is it the site of pure difference, from which meaning might arise. On the contrary, to the extent that digital reason runs precisely on the measurement and manipulation of difference, the glitch reveals the pure *indifference* underpinning the logic of exchange on which it is founded. In the first instance, the labor of the glitch is legible as a work of undoing the exchange relation as it

2 Digital reason should be understood as the contemporary mutation of instrumental reason, which was the characteristic logic of technological rationality under conditions of industrialisation and mechanisation.

3 In this glitch operates rather like certain forms of cultural studies, which seek out the exceptions from normative culture, those marginalised by gender, sexuality, ethnicity and so forth, in order to reveal the operation that marginalises them in its pursuit of an exclusive dominant cultural formation.

dominates conceptions of digital communication, and specifically of the reduction of nature to communication and norm in digital rationality. In the second, as *limen*, it mines the rift between sensible and insensible to expose the indifference on which their distinction is based, and with it the grounds of the ascendency of abstraction over the actual in the operation of bio-political government.

As labor, glitch operates then as a form of *aletheia*, revealing, that reveals, however, not being but indifference in the threshold between perceptible and imperceptible[4]. For this labor to be worthwhile, it must be other than simple, abstract labor: it must be useful. In which sense then is glitch useful? Those glitches that are knowingly produced, that is whose labor is specifically human, can simply emulate accidental glitches, as in some science fiction films. Alternatively, in art practice, it can be a work of randomizing as deliberate disruption, which in at least some cases involves choices between several glitches to select the most effective, pleasing or otherwise handy. The first of these categories, emulated glitches, are undoubtedly products of human labor, oriented towards signifying even if they seem to disrupt signification. They foreground the work of mediation in the diegetic world of the narrative, proving the accuracy of their representations of media by including errors. The emulated glitch thus extends the realist project that seeks to persuade audiences of the materiality of the world they see represented. In the second category, the foregrounding serves as interruption of exactly this realist project, but is nonetheless also human work. The remaining question concerns whether the accidental, unplanned glitch, the work of natural or technological agency, those we mostly see as purely accidental, can in some sense be said to involve labor.

The bulk of accidental glitches occur in the working life of media artifacts – scratches and physical imperfections acquired through transmission and display – and in the archive –

[4] In this it differs from the modes of breakdown analyzed by Dreyfus (1991: 70-73) in his account of the 'disturbance' or 'breakdown' in Heidegger, who must always be evoked where *aletheia* is translated by 'revealing. In Dreyfus's reading, Heidegger's concern is the emergence of things from their transparency when their functioning is interrupted, hampered or stopped. The glitch is rather a distraction, in which a scar in the medium and corresponding scar in our attention to it are equally and speedily repaired, so that it is the repair rather than the fault that challenges the smooth operation of the communicative operation. At the same time, the glitch, situated between what we see and what we choose to ignore, is the irreducible difference within the flow of indifferent units of communication: successive frames, successive scan lines, successive commodities. To the extent that attention itself is labor and therefore also a commodity, the scarification of the always partial repair is also an interruption of the communicative labor that conforms subjectivity to the regime of exchange vale.

accumulations of the dust and electro-magnetic scars. We think of exhibition – in the broad sense covering all audiovisual media – as a showing of the integral work, or something as close to it as circumstances allow; and of the archive as an institution dedicated to maintaining that integrity. Actually every screening places demands on the materials involved, including digital packages, to the extent that lower-quality showprints were the norm in the celluloid era, while the maintenance and operation of projectors, lenses and screens today is often marginalized in the theatrical cinema business and even in art world exhibitions of video and audio. Meanwhile, every archivist knows that they must prioritize available funds for specific projects, abandoning others to 'the gnawing criticism of the mice', and must frequently make the decision to abandon the historical artifact (celluloid, tape, file) in favor of digitized documentation of it, a process that always involves not only loss, but the creation of new effects occurring at the interface between different material substrates, formats, operating systems and codecs. Many of these effects are unwilled, accidental, and unavoidable. They become integral to the new form archived works take, just as conditions of screening overdetermine the presentation and therefore the experience, the phenomenality, of film, TV, video and digital visual works. As Renate Ferro and Timothy Murray suggest, we are best understanding these processes in terms, deriving ultimately from Freud, of a work of forgetting that is integral to the work of remembering. To remember is always to recall otherwise: a relationship to the past rather than a more or less accurate statement of it, arising 'from within the legacy of ruptured teleologies, whether the forgetful field of what Derrida understood as the erasures of archival fever, or from what Foucault applauds as the modifying thickness of archival accumulations' (Ferro and Murray 2015: 80, citing Derrida 1995 and Foucault 1972). A first useful labor of 'accidental', natural and technological glitching is to promote forgetting, and to integrate forgetting into the fabric of the texts and objects in the electronic archive.

Writing in the pages of the review *Kasark* in the mid-1950s, the Swedish critic and curator Pontus Hultén (cited in Andersson et al 2010: 94-95) believed that the age of representation was over, that contemporary art had to present itself instead as object in the world, and therefore proposed that 'chance enters as a symbol for the tie to reality in which contingency rules'. Reality is here defined as the zone of contingency, which has the double weighting in English of randomness and of being contingent upon, that is of being caught inside causal networks. To call this practice 'contingent' has the double sense of relinquishing control in

favor of accident, and at the same time permitting natural and technical processes to enter into the creative work of art-making. Secondly, such chance procedures are points of entry, in which chance acts as symbol. 'There is no model for the one who is seeking that which he has never seen. The pictures that are symbols for the reality he wants to construct cannot be restricted to space or time. The symbols for his freedom have to be even more liberated than he himself has the power to be'. Hultén embraced cinema as he did kinetic art as machines which already are capable of generating symbols, and indeed of being symbols in themselves in their entanglement in chains of contingent causes and effects. Their strength is not only that they are autonomous of institutional, or indeed of human constraints, but that that autonomy allows them to act as symbols; that is as things which act back on the human, but from outside it. This reciprocity between human and non-human actors is a distinctive feature of modern art, which began to incorporate real objects in the place of representing already before WWI, during which conflict however collages of found objects began to crack open the civilizational claims of the representational. At the same time, cinema operated as a system for discovering found objects ('scenes') and montage a means for constructing alterity from the ostensibly integral moments seized in the shot: a system for revivifying the symbolic order of industrial modernity by using its own technical *dispositif* to create means for extra-human intervention in the processes of meaning-making.

What results is an unsettling of the work, 'definitively unfinished' as Duchamp is said to have remarked of the Large Glass after its cracking. Or as Ryszard Kluszczynski (2007: 223) says of hypertext, 'the ultimate object of analysis is not the work itself . . . but the field of interactive artistic communication, where the work, along with other elements (the artist, the recipient/interactor, the artifact, the interface) becomes entangled in an intricate, multidimensional complex of communication processes'. What in Duchamp is still an authorial statement, subordinating technical and natural processes to the overarching control of the artist, moves in Pontén to a liberation of the artist from himself. In hypertext, as Kluszczynski sees it, a further step liberates the artwork from that very object status which, for Hultén, was the means to human liberation. Kluszczynski marks the integration of the artifact and the interface – its infrastructural technologies – into creation; what remains to be undertaken is the integration of nature. Yet Kluszczynski is correct in implying that the resulting communicative nexus is not in fact integrated into an artistic. Instead it completes the move from representation to presentation by alleviating the work of the burden of

presence. We have only to add the action of air, dust, ambient daylight, exhibition acoustics, machine noise, molds, microbes to begin to understand the full complexity of the unintegrated work as work continuously undertaken by multiple agencies. The accidental glitch operates in this becoming of the work. It acts in those works that do present themselves as both authorial and complete to indicate that neither attribute is stable: that it is not only the human interpreter who is active in the art experience but the work too.

At the same time it is worth noting, against the argument made in this paper, Wolfgang Ernst's warning that

> the unexpected corresponds to the disturbance that is television proper: the paradoxical structure of the medium demands extraordinary events that can appear only within the ever-same schematics; live broadcast would then be the condition of possibility of disrupting an otherwise imperturbably streaming flow. . . . It is precisely [such disturbances'] exhibition within their own genre that makes the paradox of television as a medium apparent: constantly having to provide the unexpected (Ernst 2012: 105-6).

Television, especially in its broadcast form, like Kluszczynski's hypertext, is not an object but a communicative nexus, and yet one that is dedicated to homeostatic regulation of difference. In the authoritative mode of broadcasting, in which continuous transmission takes precedence over all other priorities, the glitch provides evidence of the ongoing event of television: even in its failure, TV manages to continue. Like candid and fortuitous events caught by cameras, glitches consolidate the ideology of realism and liveness on which broadcast transmission depends. It carries on through the glitches, assimilating them into its regime of onward flow and indifferent differences. The art world is even more devoted to shocks and innovations, all of which function smoothly within the ever-expanding sphere of art's sophistication, its ability to assimilate *n'importe quoi*. The disruptions themselves are part of the continuity, the homogeneity of art, broadcast and biopolitical culture generally.

This is the point at which Hultén's insistence on the symbol becomes invaluable. For Ernst, machine recording, uninhibited by human listening's focus on semantics, embraces noise, but

does so first as index (there is a referent) and second as meaningful within the regime of the machine's 'interests'. For Ernst this is evidence of a rupture between human and machinic perception, human and machinic time. Hultén's symbol, etymologically the 'thrown together', indicates on the contrary the simultaneity of distraction in glitches which, as traces, marr the smoothness and reveal the alterity within indifferent flows. The symbol is not a signifier, locked into a human lexicon and grammar and severed from its referent or even its semantic signified. A symbol, as Hultén proposes it, is the privileged technical and material form marking the passage between non-human to human. As long as a glitch can be treated as a signifier, it can be assimilated in the manner Ernst analyses. But as symbol, to the extent that it marks the threshold between human and non-human, contingent reality and system of signification, it is capable of the kind of liberating autonomy Hultén celebrated, and which forms an integral part of the ontology of audiovisual media and the media arts[5].

The symbol belongs not to the presence of the work, nor even to its becoming, but to its latency. In wet photography, the latent image is the state of the exposed frame prior to fixing, which acts as a chemical amplification of the initially very small number of reactions triggered by light reaching the negative. The parallel in digital photography is the stage between the accumulation of charge on the exposed chip and its amplification, digitization and removal into storage. In computer systems more generally, latency is the time taken to relocate any item of data, such as the time it takes to download, or to access a file from a hard drive. As the temporal dimension in any retrieval, including the retrieval of the effects of light through the chains of post-exposure procedures in wet or digital imaging, latency parallels the time of perception, which is always in hock to its pasts. Symbols are always irruptions into the past of a lexicon that bring with it evidence of its externalities. Among those externalities, the temporality of perception draws on both remembrance and forgetting, misremembering and misforgetting. The glitches of memory defer and disorient when they drag up the unrecalled, in the manner of Freudian slips, jokes and dreams. Such glitches may perhaps draw on upwellings of the animal nature in humans, as accidents in language and signifying systems.

5 It is possible that media arts are distinguishable from contemporary art by their surrender of agency to non-human forces; and by their commitment to working within certain frames of materiality (film, video, network). Contemporary art of the *n'importe quoi* celebrates indifference as the *summum bonum* of pointlessly proliferated difference. It is the perfect market, in which anything can be exchanged under the token of universal uniqueness – in this the high-cultural expression of the same cultural configuration as Facebook. Media arts, with the respect for materials art abandoned along with modernism, foregrounds the commonality of its frames and supports – screens, interfaces, code – in order to propose a commons unavailable to the exchange structure of contemporary art, which can only imitate it, as in Bourriaud's (2002) relational aesthetic.

They also drag back, deformed, the externalized, repressed histories, the 'emotional and cognitive costs', that Nandy insists lie buried in histories of colonialism. To break the unity of the screen-image system through the materiality of segmented flow is the revenge of the rationalized on their rational progenitor.

The glitches we are seeking out here, those stemming from technical and natural processes, are also upwellings of externalities. As deeply repressed as human affects and ideas are the lands conquered and despoiled in colonialism, including the colonization of the commons in primitive accumulation, and the machineries of domination, from navies to weapons, railways to accounting tools. Those technologies that have become second nature, whose existence is so deeply embedded we no longer perceive them, return in their malfunctioning the evidence of their ongoing exploitation, as the repression of the colonized returns in racist 'jokes' and pornography, or reversed in sports fandom and identification with film and music stars. Technologies are similarly thematized in contemporary film and television, but equally rarely are the media technologies invited to participate in the production of the audiovisual except as the unseen supports, the screens through which we look rather than active participants in the production of signs. Glitches like dead pixels or the stutter of scratched optical media not only foreground the technical infrastructure but intervene in the production of signification.

It is important then to recognize in Hultén's symbol that signification, if it occurs at all, is an epiphenomenon of its activity. The symbol is an act. It has material consequences. A glitch in code, whether its source is human error, natural contingency or technical artifact, changes the performance of the program: is performative. It is a kind of feedback loop stitching together the repressed past with the future of the unfolding signification and communication process. It is in this respect the emergence of mediation within communication, where mediation is the primal connectivity of everything, and communication the reduction of mediation for purposes of control (survival and domination). At the same time it indicates a concatenation of human and non-human action, the conditions for the existence of useful labor in Marx. To the extent that the contemporary Market is integrally communicative, the a-signifying glitch, as symbol, is not so much a containable irrationality but an a-rational exception that disproves the principle of rule. To the extent that contemporary communication is enfolded in the operations of Market rationality, the a-subjective glitch is counterfoil to the Market as

Subject.

In this it is rather more than sabotage, rather more than a disruption of domination that, despite itself, remains dependent on domination. Coming from externalities, a-subjective, a-communicative but nonetheless mediating glitches mediate between the dominated and the autonomous orders created by the twin processes of environmentalization and externalization. For Negri, '*the common is that which distinguishes*' (Negri 2008: 162, original emphasis). Contra the idea of a global commons which belongs to all, Negri's formulation allows us to recognize claims to differential access: indigenous claims to specific places, claims for certain territories to marked as out of bounds to humans. It also promotes difference as the useful, as opposed to the indifferent regime of exchange value. Negri continues: 'Language and cooperation have to contain within them *a break at the level of practice*, an ongoing affirmation of the centrality of common practice, which means a concrete conjoining of knowledge and action within these processes' (Negri 2008: 162, original emphasis). If we understand his premise to apply also to media, which are not exclusively human, then the common practice must also contain the natural and technological, which can no longer be abstracted as environments and externalities from the human *polis* but must be recognized as having their own claims to act and to labor towards producing the common, even as their actions produce differentiations within the common.

Phenomenologically, the glitch removes intention from the pair retention and protention with which Husserl (1983: 175) marked human perception as irrevocably temporal. As a-subjective acts, glitches do not intend. Yet in evacuating intention from the flow of signification, accidental and a-subjective glitches not only undermine the intentionality of instrumental communication but replace it with another logic which belongs to the autonomous interactions of the common rather than to the freedom claimed for its actants by the Market.

Therefore as a preliminary conclusion, while some glitches operate within existing regimes of signification, a-subjective, unintentional, accidental glitches are symbolic acts which work towards the common, that is a renewed mode of mediation engaging human, natural and

technological processes in their differentiation. They take place in time, are performative, and their use is to restore difference to the indifferent exchange of the Market. In all these senses glitches should be understood not as mere accidents, but as labor.

With thanks to Geoffrey Winthrop-Young.

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