Regimes of the Parasite: exploring new domains inherent within media formations

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Abstract: Viruses are neither alive nor dead, viruses do not grow, however, viruses greatly impact the growth of systems (biological, technological, bio-technological, etc.). Ultimately, the parasite is a confounding agent for how we account for things. That said, motored by technology's productive potential, the current discourse on media technology largely ignores the structural force of the parasite. Analysis is centered on a device's own functionality and purpose. Alternatively, I suggest we examine how the parasite is integral to technology. However, instead of the parasitic threat somehow being crucial to a system's future, I take the parasite's operations as requiring new investigations into domains of and perspectives on media technology beyond those engendered by instrumentalist discourses. I propose we think media technologies as emergent within the diverse and fracturing regimes of 'the virus.' This means analyzing media as discrete formations that possibly deviate from functionalist explanations. More problematically, 'the virus' provokes re-conceiving the kinds of economies and temporal realms in which media takes form.

COVID-19 sharply reminds us of how viruses are perverse, unruly, and potentially destructive. Although lacking the sovereign characteristics of a single-celled organism, viruses are (and this is true of viruses in computer systems) parasites that generate their own menu and culture for dining at the expense of their host. The result often being, the parasite's threat of destruction – its very economy of devouring – is, in so many ways, "internalized" by a system. In this sense, a parasite may thus become integral to revealing a system's facility – that is, for a system's capacity to transform and show other potential, for all intents and purposes, in an expanded capacity. Whether in terms of biological or technological systems which, in part, anticipate the potential threats of a virus, the endless micro-warfare within the ongoing formation of a system entails a struggle with what are both historical and, as if from some never-arriving future, non-historical forces. With that said, what does the parasite being integral to systems mean for how we analyze media technology?

Within the discursive conventions espoused by American media theorist and media technology celebrant Henry Jenkins, the mere mention of the viral or media virality signals the apparently troubling and misleading specter of uncontrollable contagions contaminating the masses. Jenkins objects that the very talk of viruses detracts from the productive advancements of media technology and communication processes that are made through what he claims to be one's conscious deliberations of agency-based and boosting exchanges between both online content producer and user (Jenkins, 2013: 19-21). On another front, but in line with Jenkins' social-progress-oriented form of media theory, the prominent American communication theorist Everett Rogers' "Diffusion of Innovation" thesis and typology-based research program, which has considerable standing as a model for public

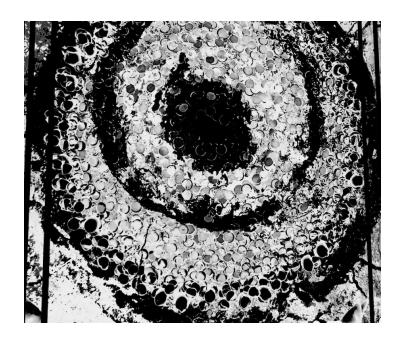
officials and various industries for sharing information with their supposed audience(s), purports to have the requisite architecture for diagnosing and addressing the pitfalls that may challenge the objective for one's transmission - the goal between communicating parties of "a two way process of convergence" (Rogers, 2003: 22). To the point, Rogers' "Diffusion of Innovation" approaches those phenomena that are seemingly detracting, menacing or interruptive to the effective communication of 'information,' as, once reconciled within a predictive chain or "pattern" of message conveyance, controllable (Rogers, 2003: 37-38). Things like media viruses, in efforts to maintain diffusion of whatever newly implemented plan, policy or innovation, are to be treated as a quantifiable momentary workaround. Ultimately, for Rogers (though not as what Jenkins perceives as a discursive obstacle to effectively conceiving our mediated exchanges), unexpected and seemingly counterproductive impediments to communication convergence - manifest through competing information or whatever deviant processes or phenomena - are construed as a likely, even beneficial, form of adversity that can, through following certain procedures, get effectively addressed or subsumed within the intended transmission of information. We need take note of the larger political implications of both Rogers' and Jenkins' theories. Whether by design or innocent disciplinal trajectory, through prescriptive methods for manufacturing harmony and sameness within a state's subjects, their theories service broader ideological interests for having our communication system's mirror prevailing hegemonic narratives. For my purposes, by the above accounts, we gather that viruses and the associated reserve of hostile-sounding terms (i.e., contaminant, plague, parasite) are, by the limited economy of a communication system's gainful and inexorable instrumentality (i.e., Jenkins' discourse for disenfranchising notions of viruses and Rogers' models for relegating the out-of-control viral figure to a potentially useful element within the development of our technologies), neutralized, or, if you will, inoculated. But, if media analysis is centered on a technology's productive potential, how do we even begin to expand the discourse to reckon with the structural force and violence of the parasite? And further, if viruses are to be conceived of as a part of our systems, rather than rationalized as a positive threat that furthers the advancement of systems, how might we need to re-conceive broader notions of functionality?

In what follows, I argue viruses do not simply disrupt or challenge the efficient and productive operations of media systems, they can, 'to the horror of' theorists like Jenkins and Rogers, in unexpected ways dictate how systems take form. Such operations I propose require radically diverging from an instrumentalist model of thinking so that we may grapple with how the virus's perverse consumption is integral to the ongoing actions and making of a system. In effect, a virus's operations inspire insight into domains of and perspectives on media technology that expands studying media beyond progress and optimization. Apart from the most recent pandemic, my interest in exploring viruses comes at a time when there is intense concern in various disciplines that critically observe the troubling impacts of technology's various mechanisms for organizing and determining our world. Often the focus is on threats and challenges to the natural environment, labor, human cognition, and the constituting of our everyday reality. Accordingly, I propose considering how the parasite as a discrete system or regime may be included in these contemporary forms of discourse. My sense is that viruses embody a counter-intuitive struggle over a lack of control, a lack of power and authority that is a new power signaled by developments in disciplines astride media, notably in studies in new materialisms and the techno-sciences. Whether concerning the plasticity of aesthetic potential inherent in everyday objects, or instead, the pre-hensive determining fabrication of our material world through nanotechnologies, a thing's potential incalculability plays a high-stake role in our future. In step with this line of thinking, the virus, not so much a liberating force in relation to contemporary technological determinations, is the new fulcrum of indeterminate measure.

By no means is the analysis of digital viruses novel. If anything, it is part of a long-standing system of analysis gone viral. However, given the way I propose to examine viruses, there are only a few host theories to which I turn for exploring our conceptions of media and viruses. To examine the form and force of viruses I enlist the rich, overlapping, and divergent works of media theorists Jussi Parikka and Ian Bogost. Parikka, in Digital Contagions, provides an extraordinary account of the histories and techno-cultural significance of viruses for digital technologies. In contrast, Bogost's analysis of *objects* that comprise our world gets us to imagine the operations of things, computer systems included, as independent of human experience. Like both theorists, I analyze media as discrete formations that exist and seemingly operate independently of human purpose, as well as, think out, if indeed there is one, the nature of their relation to a broader ecology. However, unlike Bogost and Parikka, I attempt to bring focus to how we may explore and understand media as formations that deviate from functionalist explanations. Along these lines, not only do I put into question thinking that media is inherently functional, I also seek to expand how media theorists may think about function. So, although Bogost and Parikka point to new and valuable directions for contemporary media studies their analyses are also points, in themselves, from which I pivot. To these ends, to further re-orient the conversation towards even more diverse accounts for thinking about viruses and media, I draw on Gilles Deleuze and Felix Guattari's anti-genealogical rhizomatic conception of assemblage (Deleuze, Guattari 1987). Counter to Jenkins and Rogers visions of and for media technologies, narrowly conceived either as socially progressive formations or controlled self-contained systems with potentially predictable outcomes, through assemblage we activate an approach with a seemingly divergent lexicon and discourse for both problematizing and gaining distance from the way we inherently conceive of media as being instrumental. Assemblage prompts nomadic-like description and designation for articulating the intensities, variability and (re)configuring at play in the formation and discrete workings of systems. In a word, thought of as conceptual schemes, assemblages get us to move past the reductionist logic of apophantic conventions for characterizing and ordering phenomena, specifically technological formations, in terms of immutable and productive-centered categories. Along with Deleuze and Guattari, specific to the disruptive character of viruses, I build on Alexander Galloway and Eugene Thacker's formative notion of viruses: "Replication and cryptography are thus the two activities that define the virus... What astounds us is that the viral perspective presents the animal being and creaturely life in an illegible and incalculable manner, a matter of chthonic calculations and occult replications" (Galloway, Thacker 2007: 87). Although theirs appears to be a biologically-centered account, the disruptive activities characteristic of replication and cryptography provide the base coordinates for elaborating the volatile nature of the temporal realms and economies, or systems/regimes of expenditures, in which media takes form.

Just as 'the virus' provokes re-conceiving our terms for analysis, viruses also wreak havoc on *our daily lives*. Like any party-crasher at an upscale high-security event, malware and computer viruses are an unwanted, uninvited guest. They are an intruder with a counterfeit invitation that, through resemblance and sameness, stealthily eludes detection by exploiting vulnerabilities at the threshold of a system. Upon entry, viruses activate disruption, deletion, depletion, and rerouting of system resources. Viruses and malware subvert rules, thereby making, at once, a host and home-base of the system hardware for their "seemingly" system-deviant purposes. With such a specter of intrusion in mind, towards the end of my analysis, I examine autocorrect – a common instance of benign or beneficial software known as "benware" – that, as part of a system's resources, enacts the cryptographic and replicative regimes, or, the organizational and disruptive processes of the parasite. I understand malware is a natural choice for analyzing viruses, after all, malware programs or files are often referred

to as viruses. Malware embroils the host-computer in all sorts of preservation techniques for preventing being invaded by a corrosive file, not to mention, as Parikka's techno-cultural account reveals, engaging systems in a broader viral economy. Nonetheless, as I argue, autocorrect code involves functionalizing the parasite. Autocorrect's automaticity is predicated on a code-break sequence for "self-hijacking" its *own* code sequence while making learnable, or, to be reiterated, the sequences of its hijacking process. This generative devouring logic demonstrates how systems are not so much responses to being infected by viruses, nor, even that which inherently foster their virality but, vectors active as the diverse and fracturing regimes of the parasite.



Regime Modes

Contagions are thus to be understood in the sense Michel Serres gives to parasites: parasites are not actually disconnections of communication, but thirds-excluded that guarantee the interconnectivity and movement of a system... The task is to engage the interference, not just as an engineering element to be reduced but as a key trait within the network societies of digital culture... Contagion is a jump cut, an open-ended system, an experiment (Parikka 2016: xxxix).

In the above quote Jussi Parikka underscores the complex nature of viruses, both as being interruptive and an integral part of communication systems. Typically, in communication theory "thirds-excluded" refers to noise or unanticipated

interference implicit in a system's workings – effectively, it is a system's material delimiter. Accordingly, the parasite, or "thirds-excluded," is the disruption that needs to be contended with for systems to secure the desired transmission between sender and receiver. Viruses not only threaten the regular functioning of communication systems but are representative of a deviant element that challenges the success/failure objectives and mechanisms of the sender/receiver model of exchange. Although unwanted and seemingly hostile towards the set purposes of a communication system, Parikka points out how the spread of viruses commands attention for how they are another kind of system, "an open-ended system, an experiment." To wit, contrary to Jenkins' and Rogers' optimistic accounts of what media technology does, not only are media formations alive with the potential for their negation, they are hosts to activity that cannot simply be quantified as predictive elements within the supposed frame and 'productivity' of a system.

Parikka, a media archaeologist, explores computer viruses and virality by focusing on the material and historical conditions for there being media formations. For *Digital Contagions* Parikka enters "the archive" to identify the technological and cultural forces for the emergence of different kinds of computer viruses. He analyzes viruses like the early 1970's Creeper worm and the Internet/Morris worm of 1988, both of which he demonstrates, not only afflicted communication systems but furthered immersion in a culture of technological and cybernetic security. In some sense, Parikka's *Digital Contagions* represents a post-phenomenological development upon Galloway and Thacker's account of viruses as defined in terms of "replication and cryptography." Parikka brings to our attention that infection and circulation are a complex of processes involving more than viruses simply

attaching to an "authorized" program. Analyzing individual viruses and telecommunication systems on a global scale, he shows how our contemporary technological scene is an entanglement of dense ecologies that, while dictating our daily practices, operate independently of our immediate perception of them (Parikka 2016: xxvii). Parikka's media archaeological approach gets us to think about technology, including viruses, in terms of both a general condition of "the technological" and the discrete particulars of a machine formation. Nevertheless, the interplay of these poles of inquiry appears to lead us to a problematic dissolution of its terms. Effectively, in Parikka's text, the discrete loses its discreteness by its being generalizable as technological formation. And likewise, "the technological" at times appears to be an unspecifiable condition. Technology collapses into an abyss of other systems, metrics, economies, and temporalities. Certainly, by examining technology as a complex of transforming conditions Parikka avoids essentializing things (Parikka 2016: xvii). However, his methodological framework still tends to re-institute analyzing media formations as particularized categorical instances of an historico-technological instrumentality – of technology's goals and purposes. To my mind, if we are to gain distance from traditional function-biased accounts of media, and, specifically, digital viruses, we need, to some extent, to sever our conception of the replicative and cryptographic activities of viruses from a generalized mode of organizing mechanisms. Thus, in the next section, I turn to Deleuze and Guattari's anti-genealogical assemblage which permits accounting for a system's rhizomatic processes in ways that deviate from standardized notions of temporality and systems of expenditure.

In direct contrast to Parikka, Ian Bogost provides an alternative and provocative theory about the discrete operations of things. Bogost gets us to think about things as not only framework-dependent constructs, but constructs that are their own, potentially transforming frameworks. Effectively, Bogost explores a vast universe of things – from computer graphics to lists to card-games and so on – that operate independently of an overarching anthropocentric narrative. He speculates that the relations and histories of things are not subject to apophantic constraints (which includes things not being known through or governable by the archive). Grappling with the discrete workings of things Bogost (in *Alien Phenomenology*) writes:

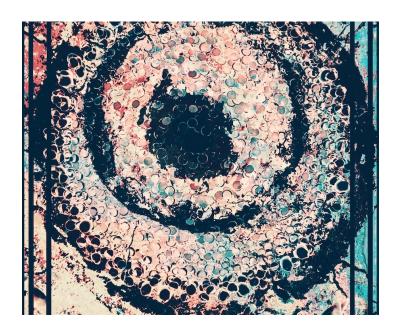
These systems of units [things, in general] are held together tenuously by accidents. I have adapted the word operation to describe how units behave and interact. In systems theory, an operation is "a basic process that takes one or more inputs and performs a transformation on it." Any sort of function can be understood as an operation: brewing tea, shedding skin, photosynthesizing sugar, igniting compressed fuel (Bogost 2012: 25).

And, a few pages later:

In *Unit Operations* [a previous book by Bogost], I offer the count-as-one not as a model for or analogue to the unit operation but as a related idea. The point is this: things are not merely what they do but things do indeed do things. ... Units are isolated entities trapped together inside other units, rubbing shoulders with one another uncomfortably while never overlapping (Bogost 2012: 28).

By Bogost's object-oriented thinking, Parikka's media archaeology may be recast as an account of a knowable/historical framework emergent within an implicitly unknowable framework of "operations." More importantly, Bogost tells us such operations are comprised of units that are their own networks of doing, of being completely other unknown operations. Thus, Bogost animates the once presumed inanimate world of "objects." However, claiming "things are not merely what they do but things do indeed do things" does not only lead us to the other-doings of operation(s). Instead, and this serves to very much underscore how I propose analyzing and

expanding our notions of temporal and economic realms of systems, 'things may operate as *in* operative.' Systems may have inoperable moments. That is, 'that things may operate as inoperative' is not the same as: things do not do (particular) things. Rather, it is that a thing's doing may not be doing anything in any functional sense. Put another way, a thing's doing, 'operationing' as it were, both relationally and by its effects, may be indeterminate. That and how "a unit attempts to make sense of another," or the very being/becoming of "brewing tea, shedding skin, photosynthesizing sugar" etc. could be an abyss. In effect, I suggest that such non-generic discrete instances of a unit operation provoke pondering the possible un-bridged "otherness" of operations. It is in terms of this mode of desultory disaffiliation, much against the above mentioned formidable coherentist conventions of Rogers and Jenkins for analyzing media technologies, that I propose we explore the disruptive operations of computer viruses.



Regime Change

But as soon as it is recognized that a code is inseparable from a process of decoding that is inherent to it, the problem receives a new formulation. There is no genetics without "genetic drift." The modern theory of mutations has clearly demonstrated that a code, which necessarily relates to a population, has an essential margin of decoding: not only does every code have supplements capable of free variation, but a single segment may be copied twice, the second copy left free for variation. In addition, fragments of code may be transferred from the cells of one species to those of another, Man and Mouse, Monkey and Cat, by viruses or through other procedures. This involves not translation between codes (viruses are not translators) but a singular phenomenon we call surplus value of code, or side-communication (Deleuze, Guattari 1987: 53).

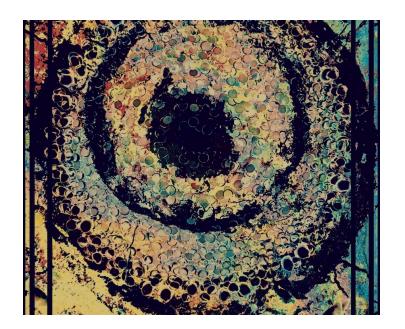
Counter to a tradition for analyzing events, systems, ideas that has been governed by arborescent or upward growth metaphors Gilles Deleuze and Felix Guattari's concept of assemblage challenges us to think about the interconnection and makings of systems as rhizomes, as continually forming unpredictable gnarly complexes of nodes from which may occur transfer, exchange, and new formations of things. Considered as an interplay of decentralized, non-hierarchical, non-linear, non-binary molar and molecular processes, assemblage goes against accounting for how systems take form and transform (through events and practices) within a coherentist or seamless all-encompassing chrono-narrative framework. For my purposes, assemblage provides us with ways to analyze the dynamic and disruptive interplay of divergent forces and systems, whether biologically or computationally, by which we may account for viruses. Interestingly, for doing a media archaeology of computer viruses, Parikka also activates the rhizomatic implications of Deleuze and Guattari account of assemblage. It serves Parikka's ethological project (Parikka 2016: 170) for identifying dominant and divergent instances of territorialization (and deterritorialization) that are extended by and through a broadening ecological spectrum of technological practices and systems. However, instead of just "supporting" an ethology I understand assemblage to articulate a disconnectedness of elements and processes from and, for my analysis of autocorrect, within systems. Contrary to Parikka's project for identifying layers or levels of exchange and support (or connectivity) for there being viruses (and virality), in short, a system of transfer/inheritance, I read Deleuze and Guattari's

assemblage in terms of the implicit violence of territorialization and deterritorialization that is both suggestive of and makes for un-chartable and disconnected phenomena. As with the quote above from Deleuze and Guattari's *A Thousand Plateaus*, I pursue stray atypical elements/vectors – described above as a "margin of decoding" or the "surplus value of code, or side-communication" – never quite included in the web of genetic and generative communication. In effect, my analysis proceeds by Deleuze and Guattari's broader conceptualization that the rhizome, as a model of system formations, resists being a highly complex system of inheritance: "The rhizome is an anti-genealogy" (Deleuze, Guattari 1987: 11). Given that an *assemblage* may take form through an intersection of the various constituting forces of a system, we understand that the very components of systems are potentially continually at odds – so much so that an assemblage's molecular elements may disarticulate and even destroy an assemblage's constituted molarity (Deleuze, Guattari 1987: 208-231). With that said, what does this all mean for analyzing the workings of viruses and systems by systems of ordering governed by replicative and cryptographic activities? How does *assemblage* get us to rethink the play of time and the excesses of systems exhibited in media formations?

Both relational and not relational, viruses are particular instantiations of code. Again, Bogost's object-oriented analytic in *Alien Phenomenology* is helpful:

The unit reveals a feature of being that the thing and the object occlude. The density and condensation of tiny ontology has a flip side: something is always something else, too: a gear in another mechanism, a relation in another assembly, a part in another whole. Within the black hole–like density of being, things undergo an expansion (Bogost 2012: 26).

Although Bogost rejects the relational and processual aspect of Deleuze and Guattari's philosophy as somehow presupposing the human for there to be the alien, his notion of unit operations crystallizes the possibilities of nonphenotypic formations as being emergent within an assemblage's intersecting of molar and molecular processes. Just as discussed earlier, a thing's designate function and framework can depart from or be independent of the ordering of our (ie, anthropocentric) purpose for a thing. However, more in terms of the unscheduled and causally oblique violence of territorialization and deterritorialization, such frameworks, as well as being non-integrated, may also simply be disordered operations. In this sense, I come to argue that the mathematical script of autocorrect very much performs the devouring generativity of the virus as an other-functioning unit. Accordingly, to account for the operations of computer viruses or how they manifest, we need to explore computers and computer viruses, not only in terms of a parasitic guest/host mechanism but, independent of systems, as being constituted as a priori breaches or code-breaks. Autocorrect provides us with an instance in which we may engage Deleuze and Guattari's anti-genealogy for how systems, apart from providing order, precede our conceptualization of what they permit. That is, they already order, or perhaps, dis-order. We, hereby, diverge from considering computer viruses as being direct or even accidental products of larger historical ethological processes to, instead, analyzing viruses as independent from networks and associated epistemological categories. In all, this turn requires breaking from instrumentalist discourses that either explicitly (as per Jenkins and Rogers) or implicitly (concerning Parikka's analytic) restrict engaging media formations by a coherent and cohesive function-oriented programmatic predicated on linear time and hereditary linkage. In step with Deleuze and Guattari's idea "that language is the transmission of the word as an order-word, not the communication of a sign as information" (Deleuze, Guattari 1987: 77) we may explore viruses, not only for what they do and mean for systems, but for how they are discrete systems.



The Parasite of Regimes

The word is now a virus. The flu virus may have once been a healthy lung cell. It is now a parasitic organism that invades and damages the central nervous system. Modern man has lost the option of silence. Try halting sub-vocal speech...You will encounter a resisting organism that forces you to talk. That organism is the word (Burroughs 1967).

Autocorrect is typically encountered in a multitude of text or data entry programs that range from computer laptop/desktop word documents to cell-phone messaging platforms. No doubt, the reader has been either aided or assailed by autocorrect and associated text insertion/correction programs.

The logic of autocorrect software has proximity with the now widely applied predictive text program *autocomplete* (i.e., upon a typed entry the remainders of sentences are pre-filled with a suggested text) and autocorrect's archival architecture has some proximity to *autofill* (i.e., personal data that is entered in the various fields of an online form). At any rate, usually autocorrect shows in terms of "corrections" that replace or overwrite one's typed entry of a misspelled word (or a word that is unrecognized by the autocorrect software). In some instances, the autocorrect function may be present by its system's graphics (i.e., under-lining the "incorrect" word) which indicate incorrect word-usage, misspelling, typographic errors or suggest that an alternative grammatical formation of a word is required. But, in many instances, autocorrect simply changes one's entry. Here is an example of autocorrect:

Text entry: I have forgotten my umbrella...

Autocorrect overwrite: I have forgiven my umpire...

Fortunately, on most computer devices that have text-entry interfaces, this commonplace and frequent erasure/over-writing can be disabled. However, when enabled, autocorrect operates by very similar computational methods and principles by which it was conceived in the early 1990s. Upon each keystroke autocorrect enacts a comparative logic that, seemingly, automatically-all-at-once deploys: accessioning alphabetically similar words from its database; a machine learning algorithm for adding words to its data reserve; enlisting a word collocation routine; and, detecting "common" keystroke-proximity errors. Effectively, an enabled autocorrect is language that corrects "itself" by making object and language of language. As autocorrect's lexical reserve expands to put in reserve different formations, it adapts to the entries of the computer user. Thus, autocorrect is its own regimen of order and dis-order that makes generative functions of the detection and substitution calculus of self-correction. Which, I contend, functionalizes the performative abyss of a virus. Specifically, it is a parasitization activated as an unlimited feeding and secretive surveilling of host-sanctioned text entries.

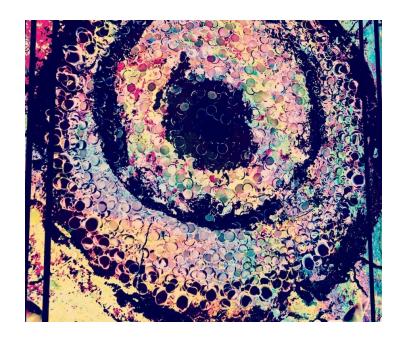
Like Deleuze and Guattari's idea that "language is the transmission of the word as an order-word," artist and writer William S. Burroughs tells us that the word itself is a virus. The word is not merely a construction that is given order and purpose by its human users. Rather, Burroughs claims that the word, though in a parasitic relationship with its human host, is independent or, more dramatically, a surveilling and/or controlling agent that is entirely foreign to its human hosts. The word as infecting-agent ensnares its host in forms of exchange that are apparently not integral (or native perhaps) to the host's being. Burroughs declares, "[the word] clearly bears the single identifying feature of virus: it is an organism with no internal function other than to replicate itself" (Burroughs 1985: 48). For Burroughs, the word-virus is to be understood both as spreading more word and as that which spreads the word's own given structuring mechanism. Notably, Bogost conceives of words similarly. Although not assessing them for their viral or even regulative potential, Bogost, reflecting on the word-based card game In a Pickle, brings our attention to the alien qualities of words. In a Pickle, which challenges its players to conjure nouns by, for instance, the size of the objects they designate (rather than by their dictionary definition), resets our engagement with language such that we may abandon a word's typically ascribed significance. Instead of asserting a particular meaning or confirming the known referent for a thing, In a Pickle gets us to itemize the possible "insides of words" (Bogost 2012: 58) - of what is alien to our purposes and ostensibly not limited within a striated lexical economy. For Bogost, the game activates an ontographic process in which we take part in "exploding the innards of things...This 'explosion' can be as figurative or as literal as you like, but it must, above all, reveal the hidden density of a unit" (Bogost 2012: 58). Bogost, like Burroughs, brings us to reckon with words as alien units or, in keeping with Deleuze and Guattari, anti-genealogically.

Now, although I do not share Burroughs' view that the word is antithetical to the human, for analyzing autocorrect I take from Burroughs' idea that the word (or more generally language), by its replicative capacity, is structured and operates like a virus. Further, amending Burroughs' claim that the word-virus has only one "internal function," I add the basic epidemiological fact that a virus (biological or computer), in part thanks to the precarity and peculiarity of each host, can also mutate. In this sense, by how they adjust to their host, viruses are seemingly self-generating. I recognize that, unlike Burroughs' generalized notion of the spoken and written word, autocorrect is a programmed application and is thereby bound by the factory-set limits of its machine learning capacity. Autocorrect does not appear from nowhere and, though very much integral to language, its being a computer program means it is not boundless in its manifestations and applications. However, in line with both Bogost's idea that things have their own framework of operations and Deleuze and Guattari's thinking that the "order-word" contains its own processes that may not only serve a system of signs, I contend autocorrect's mathematical language is (although designed to ensure that certain standards for the linguistic sign proliferate) an instance of code structured in terms of the disruptive activities of the virus. Autocorrect enacts the virus's replicative and cryptographic operations - it makes a function of parasitizing. As much as Burroughs' account of the word-virus is insightful for articulating the structure of the word/language, I should here clarify that I am not implying that, because 'the word is a virus,' the replicative linguistic mechanisms executed by computer algorithms are also products of the word-virus. Nor that, in being a regime of the parasite, our systems, as if viruses were somehow a higher-order system, are an architectural function of viruses. True to the anti-genealogy of Deleuze and Guattari's rhizome I resist such homology. Instead, I posit that autocorrect's procedural iteration of the parasite – its automated functionalizing of the parasitic - is a form of parasitism enmeshed in the sporadic, disruptive antigenealogical rhizomatic circuitry of the parasite.

Prima facie, it may appear that autocorrect's functionalizing of the parasite only re-institutes the very instrumentalist model I attempt to break from. However, as I contend, autocorrect is not simply imitative or viruslike – it is a system that is active in terms of the parasite's disruptive structural feasting. In this way, autocorrect's replicative and cryptographic activities (in terms of its computational logic) both entail its repeated return to a prior functioning while facilitating the circulation of its new currency (its word-formations) by a subtractive addition - a gainful deficit. Certainly, grammar correct, vocabulary correct, etc for phone texts or text documents are software embedded tools whose interruptive corrective mechanisms are predicated on standardized algorithmic mutational surveillance and general principles of customization. Understandably, customization provides the user with the illusion that the machine and software is the ideal host for "communication" and, as Parikka explains, this illusion is held together through the monitoring, regulating and product marketing circuitry of a broader technocultural ecology. However, what is at work computationally is that a system's hosting is realized by algorithmic containment - an inoculation and quarantine strategy for each word - of deviant, faulty and unrecognizable code substitutions. Its form of hosting (its very being as code) is active as a parasitic mechanism which deploys epidemic-like preventative measures to protect, maintain, and expand its parasitism. More specifically, autocorrect's acquisitive assemblage deploys its resources to, while hungrily consuming text, digitally index or, to use Deleuze and Guattari language, territorialize a delinquent word as a discard (or possibly as an addition). In effect, the digital discard/addition is autocorrect's coded future. And, it is in this instance that there occurs a cessation – a code-break – from system-maintaining repetitive mathematics. That is, the incalculable instance in which autocorrect becomes parasite again. Or, again in Deleuzian terms, it is the re-assemblage of its forthcoming devouring machinic configuration. In some sense, very much like Burroughs' notion that the wordvirus is repetitive, autocorrect's defense metrics make difference (or more word) by its repetitive or pre-coded propensity for copiability, or for self-same and self-consuming production. Parallel to Burroughs' word-virus. autocorrect makes a host of itself (its activities) within the inscription tools of its software host for future (per)mutations of the word. More significantly, however, autocorrect points to other dimensions of the word-virus than repetition. Namely, its cryptographic mutative capacity for substitutability. In this sense, within a computer's general functioning as text transmitter and storage facility, autocorrect is a computer's apophantic pragmatic performative. Autocorrect instrumentalizes math by way of defunct architecture – an always already functioning that institutes its past containments as copiable formula, as template, as re-emptiable code for future mutations. At once, most-rhizomatically, autocorrect activates and deactivates its own menu as a recursive regulative that permits the unit-word's grammatical, syntactical, and logographic variability.

Most Un-regimic?

The design of autocorrect ironically provokes thinking about the virus as a routinely automated/functionalized activity which hosts system-expenditure and temporalities that deviate from an instrumentalist analytical paradigm centered on *role* and *use*. Exploring the territorializing and deterritorializing interplay of the part and whole of autocorrect's expanding architecture we hereby navigate the replicative and cryptographic activities of the virus as being performed through structural deficit and defunctness. In this way, in accord with Galloway and Thacker's suggestive account of *the virus*, we can elaborate on how computer viruses hijack both the temporal and generative metric of a system/network. That, within the very pulse of a productive system a virus's "chthonic calculations" operate by their own system of expenditures for introducing unauthorized and unrecognized (non-phenotypic or non-historically exchangeable) currency (i.e., data). And further, that sustaining its disruptiveness, a



virus's "occult replications" reset the temporal metric of a system to a logic's *always already* preceding emptied code – a copiability within a spent reserve. Typically, viruses/malware conflict with a code's functioning and they do so by eclipsing a code's/functions' temporal ordering/progression. In this sense, computer viruses do not so much stall scheduled productiveness of a system's machine language as they introduce or, are present as, what is 'out of joint' or sequence with the projected future matrices of a system's calculations. I consider this disjunction is not an intermittent disturbance to the productive potential of media systems but the *moment* at which systems function and are generative.

My focus has been on an automated disciplinal instance of replication and cryptography that is predicated on disruption, however, we might also consider how such formations are their own unit or parsing mechanism that is, as both part of the "benware" and its own self-corrupting (self-eating) system, its own parasite. Generalized, regimes themselves are not mere functions of the parasite, rather, they are also subject to parasitizing – a kind of re-constitutive perverse logic of self-devouring. By such a turn, I am not proposing to eschew functionalist models of analysis so much as, unlike analyses that seek to reduce media apparatuses to being hermetic systems of exchange (like those theories associated with Rogers and Jenkins), to account for functioning in terms that reckon with the always transforming orderly disorder of our world. Thinking the processes of things and systems, as Deleuze and Guattari do by assemblage and as Galloway and Thacker do regarding the character of viruses, not only problematizes latent vitalist and essentialist views of manmade or non-manmade reality; they provoke re-orienting the current modes of discourse on technology, the environment and the social from being bounded as a functionalist event or event-space toward engaging things, processes and systems by their inherent paradoxes and de-structuralizing forces.

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Notes

- 1. Further, Rogers' Diffusion of Innovation methodology is commonly used in a number of industries, like marketing and health care.
- 2. Notably, Rogers, just as Jenkins avoids the unregulated discursive implications of virality, deploys the term diffusion to express the quantifiable transfer of information as relayed from author to audience. In effect, both theorists sanitize "spreading" and "diffusion" (Rogers, 2003: 22). They buffer their terms from polysemic possibility and the messy associations of "dispersion" and "scattered" that Jacques Derrida, for instance, thematizes when accounting for *dissemination*. Unpacking the notion of dissemination in terms of its irreducible and multi-dimensional potential(s) for inseminating text, system, etc, through a reflection on Novalis' *Encyclopedia* as organization of and genesis for writing, Derrida surmises,

Dissemination also explains itself, ("the apparatus explains itself") but quite differently. As the heterogeneity and absolute exteriority of the seed, seminal difference does constitute itself into a program, but it is a program that cannot be formalized. For reasons that *can* be formalized. The infinity of its code, *its rift*, then does not take a form saturated with self-presence in the encyclopedic circle. It is attached, so to speak, to the incessant falling of a *supplement to the code*. (Derrida, 1981: 52)

- 3. See Maurizia Boscagli. (2014) Stuff Theory: Everyday Objects, Radical Materialism. Bloomsbury.
- 4. See Luciana Parisi. (2013) Contagious Architecture Computation, Aesthetics, and Space. MIT Press.
- 5. In broader philosophical terms, it is arguable that how media is often conceived is itself a problematic of functionalist explanations.
- And further that, beyond the scope of my analysis of media technology, I may provoke re-thinking the operations of things and systems in order to bring focus to their kinds of determinations and capacity for auto-generativity.

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