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I Am a Fake Loop: the Effects of Advertising-Based Artificial Selection

Yogi Hale Hendlin¹ 

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Abstract

Mimicry is common among animals, plants, and other kingdoms of life. Humans in late capitalism, however, have devised an unique method of mimicking the signs that trigger evolutionarily-programmed instincts of their own species in order to manipulate them. Marketing and advertising are the most pervasive and sophisticated forms of known human mimicry, deliberately hijacking our instincts in order to select on the basis of one dimension only: profit. But marketing and advertising also strangely undermine their form of mimicry, deceiving both the intended targets and the signaler simultaneously. Human forms of mimicry have the regular consequence of deceiving the imitator, reducing meta-cognitive awareness of the act and intentions surrounding such deception. Therefore, the deceiver in the end deceives himself as well as intended targets. Drawing on scholarship applying Niko Tinbergen's ethological discovery of supernormal stimuli in animals to humans, this article analyzes sophisticated mass mimicry in contemporary culture, in both intended and unintended forms.

Keywords Supernormal stimuli · Deceptive semiosis · Human *Umwelt* · Evolutionarily disadvantageous mimicry · Niko Tinbergen

Introduction

Reliance on environmental signs is non-optional, but the precondition for living organisms. As humans, we have learned a semiotics of symbols on which our life depends. A stop sign at an intersection must be respected, and our behavior on streets is predicated on others also understanding, correctly interpreting, and abiding by the culturally-imbued import of such signs. But signs, and especially symbols, I will argue, can also be deceptive—appearing to offer us something that in reality they have no intention or means to impart. An email warning me that my email account is over its

✉ Yogi Hale Hendlin
yhh@yogihendlin.com

¹ Erasmus School of Philosophy, Erasmus University Rotterdam, Rotterdam, Netherlands

data limit, demanding I click on a link to immediately rectify the situation to continue getting email, yet redirects me to an unknown internet page that downloads a virus onto my computer mining my data or stealing passwords, is an example of a fake sign. Spam is the epitome of duplicitous mimicry. Such deception abuses the repository of cultural knowledge, hopes and fears, and exploits the accumulated semiotic living library for short-sighted gain or malicious caprice. Ultimately, it is parasitic on the stock of veracious semiosis of the culture and individual, as the preyed-upon individual may become more defensive, neurotic, and suspect, demonstrating the false positives of semiotic trauma.

This paper examines this ongoing experiment of the attention economy, asking: What happens when the signs in our environment are serially fake, so that the original model for mimicry is lost altogether, and this becomes an accepted state of affairs? Both at a chemical and symbolic level, in the last century the human *umwelt* has become increasingly pervaded with signs intentionally and unintentionally oriented to capture our agency, undermining our autonomy and delivering our habits and actions to convenient grooves laid by entities without our best interests in mind.

The concept of a *strange loop*, originally articulated by Douglas Hofstadter (1979, 2007) in *Gödel Escher Bach* and expanded in *I am a Strange Loop*, investigates the creation of the self as an emergent illusion. The conscious, unitary “I” of personal identity is a strange loop (or Möbius strip) because it cannot be traced back to a single clear origin; like the Buddhist notion of interdependent arising (Macy 1991; Varela et al. 1993), it is originless—searching for a single source is a futile endeavor resulting in fractal looping processes (Damasio and Rudrauf 2006). As a strange loop, consciousness is a “mirage that perceive[s] itself,” yet obstinately refuses to accept that in viewing itself it is in fact viewing a mirage (Hofstadter 2007, xii). Fusing ethological insights of supernormal stimuli together with the impact of marketing, I claim that the advertising industry creates “fake loops” of mimicry that excites our instincts, but then fulfills them through commodities that fail to satisfy—setting up a lifetime of addiction to various consumer products.

The field of biosemiotics contributes to understanding the “strange looping” of meaning humans experience with particular anxiety compared to other earth organisms. The concept of supernormal stimuli, developed from Niko Tinbergen’s ethological experiments, explains how evolutionary instincts keyed to certain salient factors in an organism’s *umwelt* can be manipulated and controlled to elicit perverse maladaptive behaviors (Tinbergen 1951; Barrett 2010). Deirdre Barrett’s book *Supernormal Stimuli* incorporates the lessons of ethology and cognitive ethology, applying them to twentieth-century *Homo sapiens*’ barrage of marketing. Barrett chronicles how our senses and instincts, evolutionarily geared to confront certain narrow ranges of mating opportunities, foods, and threats encountered seldom in our environment, have been hijacked through “supernormal” versions of those stimuli we are evolutionarily programmed to be attracted or repulsed by. For example, our primate desire for sugar is quite adaptive, as long as sucrose is rare and unprocessed; when sugar becomes extracted, distilled, and commonplace, however, these same instincts can lead to serious health problems. Marketing and embellished consumer products far more intense and calibrated than substances historically available, sold through spurious if dazzling associations with

patterns of light, sound, and status evolutionarily keyed to capture our attention, have a somatic and instinctual power over us never before experienced by our kind.

Sudden shifts in *umwelt* composition within a single or a few generations do not allow organisms' encoded instincts to recalibrate sufficiently to adapt to the new circumstances. For instance, the scientific discourse surrounding assisted migration for animals and plants that cannot adapt quickly enough, or expand their resiliency repertoire of tolerable temperatures sufficiently, revolves around the necessity to laboriously move species populations from regions of drastic warming where they are not flourishing, to (usually colder or higher) regions that better match the (now too warm or parasitized) regions they evolved in (c.f. Palmer and Larson 2014). The temporal limits of adaptability recognizes the role of genetics, and the contrastive rhythm of evolution to the blitzkrieg of changes industrialization has perpetrated in the world.

The industrial processes of hydrocarbon combustion and chemical manufacture have unleashed a Pandora's Box of toxins causing normal DNA replication processes to malfunction, disrupting the endocrine system, and causing acute and subclinical illness (Lee et al. 2009). Chronic disease, much of it resulting from persistent environmental exposure to human-made toxins, is compounding human suffering (Stuckler and Siegel 2011). These chemicals have also undeniably changed our behavior as a result of the pervasive raised concentrations of dioxin, small and large particle pollution, and other debasements of our air, water, soil, and temperature (Bennett et al. 2016; Sapolsky 2017). Like all life, our non-negotiable permeability and co-construction with our *umwelt* means that when our *umwelt* sends us clean water, soil, and air, we tend to prosper; and when these media become pumped full of toxins, we become full of toxins (Leopold 1949). Our fragility vis-à-vis these chemicals is because they mimic other chemical transmitters with similar shapes as our biochemical receptors.

In lockstep with industrialism's chemical attack on our ability to meaningfully interpret the objects we confront, we are also faced with an equally pervasive capture and exploitation of our evolutionary capacities and proclivities through advertising. Advertising is duplicitous mimicry for the human organism *par excellence*. The historical reversal of human needs begetting products to fulfill those real needs, has created an arena where consciousness and identity are bought and sold on the auction block of per-swipe marketing. The symbolic world, which once served to extend and record mind and history, now has become a commercial space parasitic on nuances of thought and diversity of consciousness.

Under the evolutionary framework that mimicry is a communicative process, I claim that there is no active agent "deciding" that mimicry would be a good idea, figuring out how to imitate the original patterns to be mimicked, and then intentionally following through with the desire to deceive. Rather, it is supposed that those kin species with the most alike phenotypes allowing them to evade predation reproduce more, passing on the desirable trait. I extend this biological concept of mimicry without an intentional mimic, for the most part, to those in the advertising business. They may be aware of some of the narrow instrumental processes, but the actual act of exploiting human instincts, as well as their ignorance of the ranging consequences of their actions, I argue, are as unconscious

and automatic as those whose similar faculties they manipulate.¹ All actors are implicated and impaired by the same processes and structures, whether parasite or host.

Semiotic Hegemony and the Problem with Artificial Signs

The concept of “semiotic hegemony”—forms of semiosis systematically dominating and impinging upon other semiotic forms (Tønnessen et al. 2015, 6)—allows an ethical aperture through which to examine certain types of mimicry in human society. Of concern here is not those forms of semiosis that coexist, and are compatible with coexistence of other forms of semiotic diversity, however competitive. At issue is a specific variety of semiotic relating that systematically renders illegible and even extinct preexisting and alternative semiotic forms.

As Ivar Puura (2013, 152) describes the “modelled artificial environment” as a simulacra (in Baudrillard’s usage) that replaces rather than pays homage to the original environment, the artificial environment of two-dimensional screens does not coexist with natural forms, but instead overtakes and eventually totally covers the three-dimensional basis that provides for its existence (Appelbaum 2018). Puura writes,

By wholesale replacement of primeval nature with artificial environments, it is not only nature in the biological sense that is lost. At the hands of humans, millions of stories with billions of relations and variations perish. The rich signscape of nature is replaced by something much poorer. It is not an exaggeration to call this process semicide. (152)

Puura’s development of the concept of semicide, described in Estonian more in detail than his few translated works, is crucial in diagnosing how supernormal stimuli override native human attributes preventing the total absorption of the organism in the pain and pleasure networks set up in late industrial capitalism. Maran calls Puura’s uncovering of semicide the “dark side of semiotic relations” (Maran 2013, 148)—the imperialistic if naïve march of a semiotic regime to exterminate existing sign systems. Puura crucially does not assign necessary malevolent motives for the carrying out of semicide, acknowledging that semicide often occurs through “carelessness” (Maran 2013, 152). Much like Adolf Eichmann in Arendt’s (1977) analysis of “the Banality of Evil,” great destruction often is carried out unthinkingly—through a lack of reflexivity, a lack of critical thinking buttressed with numbness. No matter how clueless or unthinking the motives, however, the damage is real: semicide “steal[s]” the “identity” of those living in other semiotic-*umwelt* dynamics, because in destroying the “signs and stories that are significant for someone” (Puura 2013, 152), that person or organism loses their world (*umwelt*), it’s reference points to itself. A being denuded

¹ The question of the motivations underlying the specific type of mimicry we call propaganda and advertising, as interesting as it is, falls outside the scope of this paper. Contra Bernays (1928), who focused on the “conscious and intelligent manipulations of the organized habits and opinions of the masses,” this article focuses on the limits of conscious manipulation, and the unintended consequences for selecting another’s attention based on a single metric, in this case, profit.

of its *umwelt* loses the sense (meaning) its sense organs came to rely on and relate to. To replace the memories and embodied ancestry of an indigenous tribe with smartphones and studio apartments exterminates the habitat out of which that culture evolved, severing the network of identity from which their culture emerged.

Systematic semiocide through the cooptation of the superficial but salient aspects of an inhabited *umwelt* has been a classic bait and switch strategy throughout history. In order to win over the pagans, Christianity superimposed their major holidays on the preexisting dates celebrated by peoples they colonized; Christians also built their churches on top of the sacred sites, temples, and burial grounds of the people they conquered. Comaroff and Comaroff (1992) discuss the “colonization of consciousness” always at work in any act of conversion. Likewise, advertising global consumer products and services colonizes and deterritorializes local sign systems ingrained and familiar to indigenous and traditional peoples.

Replacing the extended correlates of thought and reference with a substitute set of characters without local materiality does commit, in a sense, semiocide. What is unique about advertising and other forms of propaganda, primitive and refined, is the replacement of territory-based signs with abstract and hypostatic ones. That this all happens against the backdrop of the physical destruction of environments through industrial forestry, mining, damming rivers, and gentrification in cities, leaves no place or physical reference to turn back to; instead, at best, nostalgia and melancholy are the poor substitutes of degraded landscapes and ruined homelands. The crucial difference here rests on the preservation and mutually productive interaction, versus destroying the relationship between self and circumstance through imposing degenerative but forceful semiotic habits.

Artificial environments produce awe without wonder. “Artifacts are incomparably poorer than the life they are designed to mimic,” E.O. Wilson maintains. “They are only a mirror to our thoughts. To dwell on them exclusively is to fold inwardly over and over, losing detail at each translation, shrinking with each cycle, finally merging into the lifeless façade of which they are composed” (Wilson 1984, 115). Bringing Hofstadter and Puura’s insights together, Wilson notes how purely symbolic worlds tend to replace the living worlds to which they once referred. Without symbols integrated into the living signs they derive from, a stand-alone virtual world appears that, until the ultimate destruction of its physical means of existence, appears untethered from life per se in a digital simulacra.

Semiocide occurs simultaneously on physical and mental levels, linking the colonial project with the deceptive mimicry propaganda involves. Accompanying the destruction of physical rainforests, we are sold Disney films romanticizing the pristineness and idyllic nature of such landscapes which either no longer exist or which we will never directly experience. Instead of rewilding our local lived landscape, we are fed a steady diet of virtual reality environments, lush two-dimensional voyeuristic experiences of untrammelled nature via *Animal Planet* and other fantastically narrated David Attenborough documentaries. Such images feed our sense of biophilic connection without the attending full-spectrum semiosis which occurs when we involve ourselves corporally in the composition of such habitats as homes. Such is the strange loop of supernatural stimuli.

“What is homesickness,” Puura writes, “if not a wish to return to our reliable world of dearly loved landscapes and smells, familiar signs and relationships?” This

Naturverlassenheit traces a disorientation which occurs when the scaffolding of our environmentally-porous identity is ripped away. Puura understands this yearning for the familiar signs and relationships of natural surroundings as a yearning for meaning and self-constitution that has been degraded through those far away instrumentalizing those places we hold dear.

Rather than holding contempt for some circumscribed group of others, Puura and W.H. Auden understand their own ontological fragility as plural, interdependent, and porous beings. Such surrender to embeddedness in one's environment spurs responsibility for curating it in a relationally-sensitive manner. Recognition of complicity in meaning-destruction Auden expresses as a reflexive awareness of the "sense the furies [humans have] hidden in themselves, evils they hope never to unleash"; whereas he is skeptical of

those who can say of themselves without irony, "I am a good person," who perceive great evils only in other, evil people whose motives and actions are entirely different from their own. This view has dangerous consequences when a party or nation, having assured itself of its inherent goodness, assumes its actions are therefore justified, even when, in the eyes of everyone else, they seem murderous and oppressive. (Mendelson 2014)

Especially in light of studies detailing how dehumanizing other groups through demonizing anyone affiliated with these groups is the ingredient that permits the genocides, atrocities, and systematic numbness to other beings (Smith 2012), the self-reflexivity of understanding one's own shadow side mitigates against collapsing others to one-dimensional unalloyed difference. The ecological effects of unthinkingness, however, are real.

There is no overriding balancing force that prevents the semiosphere from irreparably changing state. Objects that once were interpreted uniformly by a group as A, may now henceforth be militantly interpreted as B, or ignored altogether. Like the concept of punctuated equilibrium in systems theory, when a rain forest through overcutting can change into a savannah (Gunderson and Holling 2002), so too the semiosphere's diversity can fall prey to certain pervading signs which colonize relational space, replacing other preexisting signs. In other words, "signs evolve, and certain cohesive sets of signs become commodified, infecting the semiosphere at large" (Tønnessen et al. 2015, 6). Without resisting the inevitable semiotic changes which use and iteration bring, we can nonetheless differentiate regular topographic shifts in the semiosphere as distinct from vectors of semiotic colonialism.

Overestimating Autonomy and Underestimating Automaticity

Part of the snag of discussing self-reference, is that what is referenced in order to compose meaning isn't an isolated "self" at all, but an ecosystem, a synesthetic composition and reflection arising from the primordial ooze of an encountered *umwelt* (similar to Heidegger's notion of "thrownness" (*Geworfenheit*), cf. Buchanan 2008). The sum of signs we encounter at all levels, endo- and exo-semiotically, contribute not

only to the content of our self-referencing, but also to our capacity for reflection (Hendlin 2016).

Refashioning Descartes according to the Pragmatist framework produces: “*we think, therefore I am*” (emphasis in original, Rochat 2009, 35); the process through which selves are made and the construction of the individual (the difference between “I” and “me” in Mead (1934)) in Pragmatism is essentially rather than additionally social. Only by existing a priori in a society of other beings (human and nonhuman) and in an environment of specific objects and affordances do I come to know myself *qua* agent with an identity.

As compelling as it is to think of ourselves as rational agents, empirical data reveals a different story. Sapolsky (2017, 483) argues that we engage more often in “moral dumbfounding” (“clunky post-hoc rationalizing”) than rationally-predicated moral judgment. He gives the example of the low predictive power of using a framework of philosophy or ideology in judicial decision-making, compared to the high predictive power of a given decision based on whether or not a judge is hungry (Sapolsky 2017, 483). On the topic of our post hoc selves, Byrne (2012, 146) concedes that

humans can and do represent causes and intentions... But do these, retrospective, verbal accounts actually correspond to causal mental states that generate our behavior when we are not explaining anything? We are always reluctant to accept how much of our behavior is an automatic and fast product of mental processes of which we are unaware but I think this should be seriously considered for the case of theory of mind... it may be that calculations about others’ mental states *are* causal... But the heretical alternative is that rather different, mechanistic but unconscious processes—analogous to those that allow us to parse behavior—actually cause most of our everyday social behavior and interactions with the world of objects, and mentalizing is a secondary process.

This “heretical” thought, that much of our behavior originates from the habitual and automatic processes of our basal ganglia rather than the much-prided human prefrontal neocortex (which only mammals possess), is, as Bargh and Chartrand admit (1999, 462), “difficult... for people to accept.” And yet, they maintain that “most of a person’s everyday life is determined not by their conscious intentions and deliberate choices but by mental processes that are *put into motion by features of the environment and that operate outside of conscious awareness and guidance*” (emphasis added, Bargh and Chartrand 1999, 462). Our habitual and automatic responses save us valuable effort, energy, and time. The willpower required to make decisions with the prefrontal cortex, deciding how we’re going to tie our shoe, or open the door anew each time, would paralyze us from ever living life. For learning new tricks we must engage the prefrontal cortex, but as Barrett (2010, 93) emphasizes, “we don’t want to stay in the frontal area indefinitely,” or else we would be stuck giving full attention to routine tasks, and drain our ability to concentrate and learn new things.

Taking up this challenge by linking Hofstadter’s notion of the endless loop of our consciousness with 4e(a) cognitive science approaches affords questioning the ends of human mimicry designed to manipulate, control, and disempower, and examines the consequences and mechanisms of such technologies of advertising as supernormal

stimuli hijacking our hardwired instincts. Advertising, not alien from Plato's critique of rhetoric, sophistry, and poetry, turns out to be an empty signifier, an exhausted sign (Bennett 2015).

Anthroposemiotics is unique in the ability to hypostatically abstract, as Frederik Stjernfelt (2007, 2014) has proposed, following C.S. Peirce. Concomitant with this unique ability on this planet, comes the danger of abstracting away the object of signification. Such degenerative semiotics chafes against Peirce's insight that "signs grow." While semiotic meaning morphs as a matter of course through interpretation, without an object, the ingrown referentiality of overly-symbolic semiotic forms fails to refer to anything beyond a closed semiotic sub-reference system. All information is funneled through a preselected set of beliefs or parameters, and the semiotic openness which is constitutive to life, seems to be largely absent. Any new information is interpreted through preexisting categories (cataphatic semiosis), rather than revising categories to fit new data (apophatic semiosis) (Fraser 1997; Dobson 2014).

The symbol, the most manipulable sign type, derives from the Greek *symbollein*, "to throw together." This throwing-together of different components, risks a slipshod mishmash of things that "go" together only through repetition and force. Far from being a natural kind, the symbol permits opportunism and chicanery to creep in, presenting disparate ideas or relations juxtaposed, and via conditioning of associating these disparate objects, we come to regard them as belonging together. This is the genius and the aim of branding.

As Bennett (2015) explores, in the advent of advertising and the shift from mimicry to mimetic culture, when sign replication replaces the triadic creative process of signs, these signs "degenerate" into dyadic "pseudosigns" that become unmoored from their object. The difference Bennett sees between semiotics and mimetics, is that the meme has no object. While masquerading as a sign, the meme remains denuded of a final object, stuck in an echo chamber of interpretation and patina pointing to nothing beyond it. In Baudrillard's (1994) language, semiosis with only a representamen and an interpretant but missing an object is in fact a *simulacrum*. Reinterpreted signs ungrounded in physical consequences, Bennett (2016) has elsewhere termed "necrosemiotics," alluding to the parasitic and decontextualizing qualities of degenerative semiotics foreclosing other domains of semiosis.

To take seriously the conjecture that there exist certain semiotic forms that, like black holes, accrete other forms of "living" semiosis and swallow these types of signs into a thrasher of objectless reference (or "untethered reference" (Eco 1992)) requires investigating the fallout from such processes. Mimetics conceived as a failed form of mimicry, even if deliberate, begs the question: what affect does degenerative semiotics have on the interpretant? Is the interpretant even aware that there is not a "there" there? If not, does this impact semiosis?

Konrad Lorenz discusses the "Innate Releasing Mechanisms" found in humans instincts (like parenting) that are exploited by marketers. His examples include "the film industry, intending to meet man on the instinctual level, has developed an optimal baby" and "childless women [who] select substitutes for babies in their pets" (Tinbergen 1951, 209). Likewise, Walter Benjamin (1969, 231) understands how the medium of "film responds to the shriveling of the aura with the artificial build-up of the 'personality' outside the studio. The cult of the movie star, fostered by the money of the

film industry, preserves not the unique aura of the person but the ‘spell of the personality,’ the phony spell of the commodity.” In terms of sophistry and compensation, ripping an object from whence it came renders a three-dimensional practice into a flat image, an idol. Living practices, when dislocated, render a “neutral” image, equalizing the role of objects arising out of particular cultural historical milieus with the infinite duplicability of commodities (Mander 1978, 286). In mimetic culture, the person, image and picture then become products, which like all commodities, are designed and created to be mass produced and sold without an original mold from whence it came. In the age of mechanical and digital reproduction, “all duplications [are] of each other” (Mander 1978, 287).

The peculiar sort of en-framing (*Ge-stell*) of the advertising age, places all objects on a supposed equal frame with other things that can be framed. This construction of “the virtual window” (Friedberg 2009), the disembodied and portable frame, permits anything within the frame to be reshuffled and substituted—with the consequence that anything that doesn’t fit in the frame, doesn’t exist for the intended audience and gets rendered illegible through the medium of technology and technoscience. Performance theory notes that human subjects also in many ways enact roles pre-described and –scribed through cultural beliefs and mores (Schechner 2006).

Gregory Bateson articulates this change when he mentions that “[a]mong human beings mode identifiers can be falsified,” giving examples of mode identifiers such as “the artificial laugh, the manipulative simulation of friendliness, the confidence trick, kidding, and the like” (Bateson 2000). Bateson mentions that some mammals (and indeed other non-mammal animals (El-Hani et al. 2010)) also exhibit deception. But, it should be noted that for Bateson, deceptive mimicry in the human animal occurs in an additional register—that of *self-deception* in the act of other-deceiving:

Among human beings we meet with a strange phenomenon—the unconscious falsification of these signals. This may occur within the self—the subject may conceal from himself his own real hostility under the guise of metaphoric play—or it may occur as an unconscious falsification of the subject’s understanding of the other person’s mode-identifying signals. He may mistake shyness for contempt, etc. Indeed most of the errors of self-reference fall under this heading. (Bateson 2000, 204)

Humans uniquely fool ourselves as we fool others. We have a propensity to believe our own lies, to foster die-hard beliefs supportive of our ideologies (Eagleton 2007); hence, our general readiness to stand on political issues according to where we sit in society’s status hierarchy. Bateson’s insight brings to a point the danger of supernormal stimuli, that no one is knowingly engineering the carnival of deception; there is, for better or worse, no evil genius. The virtual reality of false concepts we invest increasingly our mental, energetic, and physical resources into sustaining, manipulating, and controlling, engenders processes that addict us to strange feedback loops of chemical sensations that the dopamine hit of checking our messages and realtime status imparts (Babich 2013).

Catering to *Akrasia*

In Book VII of the *Nicomachean Ethics*, Aristotle (1999) describes *akrasia* as a type of debility or disease entailing a human's appetitive aspect to override the rational aspect. Political philosopher Philip Pettit describes "blind spots, *idées fixes*, fallacious habits of reasoning, affective pathologies, ineradicable compulsions, mesmerizing intimidation or temptation" as the agreed upon construals of akratic behavior which makes it abnormal (2008, 69). All of these factors can impinge upon rational reflection, and action based on reason. In his novel and incisive analysis, Pettit examines how "integrated collectives [are] likely to be plagued by a malaise resembling *akrasia*" (2008, 87). *Akrasia* is a social disease, both in terms of the social origins of individual akratic behavior, and insofar as the factors that lead to *akrasia* systematically affect entire communities.

Noting the fake loop of determining the origins of *akrasia*, Cross and Proctor (2014, 60) suggest that industrially "packaged pleasures may even have made us more hedonistic, with consequences we have not really thought enough about." In this sense, to be "more hedonistic" does not necessarily mean that one enjoys pleasure more, only, that one is more likely to give oneself over to certain types of pleasures, and have less capacity to balance the appropriateness of such immediate and unconditional surrender. More abstractly, Juarrero (1999, 250) adds that the "degree of robustness of individual attractors, therefore, is not a feature intrinsic to them but is dependent rather on the overall system's 'general, underlying' nature. So is *akrasia*, or weakness of will." The distributed agency of susceptibility to advertisement and products too-good-to-be-true must not be all-too-easily blamed on the weak-willed individual. Indeed, in sociology, the term "responsibilization" captures the buck-passing that corporations and other entities commit, displacing their responsibility as producers and marketers of unhealthy things and ideas and instead shaming overly-indulgent consumers (Shamir 2008).

The entire edifice of profit-driven marketing (rather than, say, public service announcements) is predicated on responsabilizing the weakness or addiction of consumers—exculpating the corporate role in inducing social and physical diseases. The myth of individualism states that no matter the external factors, ultimately one maintains sole directive over one's behaviors and actions. Belief in this myth is imperative to systematically convert commons into privatized commodities. The myth of the self-made man is the bedrock upon which marketing can go about devising ever more unsuspecting modes of pervading the lives of people with their products.

And yet, "obesity is as much an environmental (and political) disease as anything else," as certain foods jump out at us in advertisers' push on us to consume, while others languish unadvertised in the ever-shrinking produce aisle of the (increasingly corporate) grocery store (Cross and Proctor 2014, 90). The technological contributions to binge eating—accessibility, distillation of certain substances while throwing out their natural braking system (i.e., orange juice without the fiber), and the hard work by companies to make packaged things socially and politically acceptable—overrode the evolutionary stopgaps present between organism and environment that in most cases prevented disease and death from overconsumption. David Kessler (2010) describes how "conditioned overeating" of "hyperpalatable foods" bypasses normal physiological limits. The rise of these "pseudofoods" meant that "real" food like broccoli no longer had any taste. The palate had changed. The neurons had rewired.

Social customs and seasonal eating no longer exerted their centrifugal saving force. Supernormal food “displace[s] and subordinate[s] pleasures that are not consumer goods” (Kessler 2010, 273).

This transformation of our attention and nervous system, however, did not happen *sui generis*. Rather, it emerges as a byproduct of an unscrupulously narrow-minded industry built on internalizing profits and externalizing costs. In the last century the means of advertising have undergone an incomparable metamorphosis. In investing billions of dollars in researching the psychology of children in order to better control them and their parents through advertising, this very act dehumanizes the targets of advertising (Barber 2008; Hastings 2012a). Yet, my thesis is not that the people plotting and scheming are evil; such would be an easy situation to correct if we could merely identify and root out those bad actors. More insidiously, and dangerously, the harm does not rest entirely with certain actors, but arises from a systematic deformity in the legal, political, economic, and cultural spheres. By selecting upon a single metric—profit—and engineering behavior to increase that lone desideratum to the detriment of the myriad other aspects of the subject, marketers—even well-meaning ones—prey on stoking the flames of bottomless desire at the cost of reflection and restraint. By mimicking and generating the biggest fears and desires of subjects, corporations prey upon fantasy and nightmare to conjure images they profess their products will resolve.

An example of this is the fierce debate over sugar. The science is clear that sugar in refined high doses leads to a host of immediate and long-term diseases (Leslie 2016; Lustig 2017). (Full disclosure: I am a sugar addict.) Until a few centuries ago, sugar was hard to come by on a regular basis, available in most parts of the world only seasonally. Today, refined and processed sugar is added to most commercially available foods (Nestle and Pollan 2013). Media feeds us a steady stream of impulses reinforcing cravings for sugar, dressing up their products with celebrity endorsements, sexy brand ambassadors, price “discounts” (buy one get one free!), and colors and sounds focus group-tested to elicit the most enthusiastic impulse desires engineered to translate into buying behavior (Hastings 2012a).

When we inquire into the long-term effects of advertising to children and youth especially, what we’re investigating is not only the behavioral outcomes, but the neurological imprinting and wiring performed (Kubey 1996; Christakis 2006, 2010; Barber 2008; Takeuchi et al. 2015). If children are constantly being seduced by new desires, from a medium they are helpless to on an evolutionary level—TV as teacher—then they are more likely to become addicts not just of those things being sold to them when they are young, but to other dangerous substances as well when they are older (Alexander 2010; DiClemente 2018). In one study of food commercials during children’s television shows, researchers found that many sugar product commercials portrayed food as addictive drugs of abuse, and exploited scenes of violence, trickery, dependency, fighting, stealing, treating adults with disrespect, and using “extreme measures” to obtain the advertised food item (Page and Brewster 2009). The authors highlight that while for sugar-sweetened cereals commercials obtaining the product is the main sell, fast-food restaurant commercials focus more on the social benefits of buying a children’s meal or the “emotional experience (e.g., fun and fantasy) of visiting the restaurant” (Page and Brewster 2009, 154). While these advertising strategies differ, both aim at creating an emotional bond with the child in order to sell the child a product ultimately harmful to the child’s health, contributing to the epidemic of childhood

obesity, and promising passive consumptive reward experiences with diminishing returns. Advertising-induced addiction mimics both the social and palate signals that trigger instinctual behaviors of consumption not only biochemically created to replicate nutritious foods without delivering the nutrients, but also the social status anxieties that associate consumptive behaviors with social validation.

Obesity is becoming the leading cause of death in developed and quickly in developing countries (Anderson and Butcher 2006). Yet, researchers have only peripherally begun to grapple with the astonishing fact that the disease vector of obesity is the advertising industry and the unhealthy products it hawks (Barber 2008; Hastings 2012b; Montgomery et al. 2017). Food conglomerates for over a century have perfected how to sell more packaged foods; and adding plenty of fat, sugar, and salt, is the magic formula they landed on. Marketing, of course, has played a prime role in tooling instinct. “Marketers produced the ‘itch’ that manufacturers could then step in to scratch,” Cross and Proctor (Cross and Proctor 2014, 70) write. Barrett likewise (2010, 90) stresses, “In a world increasingly designed to stimulate hunger, ‘listening to what your body wants’ is a losing strategy.”

Ensnared in a natural habitat and face-to-face community, as humans have been until very recently, meant a necessary trust in the sources of nutrition in available food and communication from social cues. Alienated from such immediacy meant that signaling of physical and social survival could be hijacked by remote sources such as advertisements, fulfilling that instinctual need to follow information according to these parameters.

Breeding addiction in a population, especially from a young age, takes away the agency of members by overwhelming healthy inherent attributes such as skepticism, recalcitrance, and independence. For example, high fructose corn syrup does not produce insulin secretions, bypassing the body’s physiological satiation system that occurs with unprocessed sugar, and instead stimulates fat cells (Cross and Proctor 2014, 245). Because contemporary cigarette tobacco is flue-cured, a process that lowers the pH to make it easier to smoke and softer on the throat, tobacco also has become a supernormal stimuli (Cross and Proctor 2014; Proctor 2012). The shut-off valve—an irritated throat, nausea, dizziness—normally found in air-cured tobacco, has been dismantled. This technology of flue-curing, and now extracted nicotine in electronic cigarettes, does away with the inherent limiters and fuses of the substance. Thus, a substance met historically amongst indigenous peoples of the Americas with little evidence of addiction, once flue-cured by Europeans to make it less harsh, and used outside sacred purposes and ceremonial contexts, tobacco exerts a powerful addictive tendency (Proctor 2012). By methodically removing the defensive engineering of nature, the breaking joints previously intact giving signals to the body and brain to stop, are soldered over and disabled, leading to the shadow side of the pleasures these substances and spectacles promise.

New introduced products have removed the traditional stopgap of satiety through engineering versions of long-standing desires that fail to trigger the feeling of completion. When healthy and pleasurable habits are provided products similar to those used in our evolutionary history but amplified with the fail-safes removed, these mimics refuse to let consumers go, precipitating hungers that can never be fulfilled. For example, Kühn et al. (2010) found that the “brains of smokers are structurally different from those of never-smokers in a dose-dependent manner.” This included “cortical

thinning” in long-term tobacco users, “imply[ing] dysfunctions of the brain’s reward, impulse control, and decision-making circuits.” Hong et al. (2013) similarly found cortical thinning in adolescents with internet addiction. Whether to a drug or an experience that acts on the nervous system as a drug, addiction, which has biopsychosocial aspects, can erode the sovereignty of individuals to act, rather than react, to myriad situations. Such loss of control can undermine autonomy, sometimes almost permanently as brain circuitry and growth become commandeered, creating a reactive impulsivity that can be easily manipulated by marketing, news, and propaganda calibrated to produce unreflective action. Addiction produces a vicious circle of increasingly outer-directed action, impelling the consumer to attach to particular substances and brands to curb their inquietude.

On the other hand, semiotic habits also works virtuously. Developmental conditioning reinforcing autonomy and resilience can make it so that “[r]esisting temptation is as implicit as walking up stairs” (Sapolsky 2017, 519). The opposite of *akrasia*, developing the right habits generates an incredible power of unreflective yet beneficial habituation. In such cases, willpower is “not a function of what Kohlbergian state you’re at; it’s what moral imperatives have been hammered into you with such urgency and consistency that doing the right thing has virtually become a spinal reflex” (Sapolsky 2017, 519). Hofstadter (2007, 6) refers to habit embedment as a “reflex action,” whereby what appears as choice from an outside perspective, experientially actually is an unconscious habit of mind. The key then, to encouraging a society so that people’s lives go well, is to curate the environment so taking care of oneself and others becomes easy, rather than an uphill struggle (Appiah 2010). Habits can be adaptive, and resistance to predatory fake signs that mimic social and physiological desiderata in a vacuum of clearly established sign habits can be inculcated through deepening the grooves of virtuous habits.

The concept of holobiont selection illustrates how essential it is to get things right initially to set organisms up to adopt self-preserving and environment-sustaining habits. A holobiont can be defined as an animal, plant, or fungi “host together with all the microbes living on or in it, exosymbionts and endosymbionts, respectively” (Roughgarden et al. 2018). Understanding a crucial unit of evolutionary selection as selecting on the macroorganism and its entourage of microbiota, a single-dimensional product is but the shadow of fulfilling the ecological need that desires actually elicit. When we consider the biological provenance of human decision-making, and the ability to synch behavior with internal and external stimuli mostly unconsciously, then advertising, which selects upon a single trait – ultimately, profit – undermines the good of the holobiont. Advertising induces behavior to repeatedly, and as often as possible spend money on a given product and on products in general in order to meet “needs” which are poor heuristics for the larger set of needs that would benefit the whole organism ecosystem. Environmental selection based on advertising-mandated heuristics breeds a very peculiar animal. It selects for attributes that take away agency, that hurl us into the throes and accompanying mental health issues of *akrasia*. Beyond the tension of intellectually knowing better but not being able to restrain yourself – the definition of *akrasia* (the appetitive side running the human holobiont instead of the rational side) – marketing and modern consumerist culture aims to buttress the rational to go along with and override the healthy instincts of the appetitive side.

In discussing *akrasia*, Tinbergen (1951, 208) references the starvation period in Europe during World War II, stating that “everyone who has lived through periods of real starvation—a condition, common enough outside the Western world, that has touched western Europe just long enough to make its significance clear to us—knows how relatively weak reason is when it is up against really powerful instinctive motivation.” Tinbergen describes how a person in “his youth, knows how often the urge has driven him ‘blindly’, ‘against his better judgment’ to obey it, when there was a conflict between better judgment and drive” (Tinbergen 1951, 208). This tension between urge and judgment, however, is not merely a problem of *akrasia*. It is a problem of setting up our *umwelt*. Our built and natural *umwelt* directs and guides our capacity for reason; and a built *umwelt* bent on inflaming our cravings and aversions, making us insecure and overreaching, systematically deprives all but the most insulated or exceptional from a more reflective command of reason. On this ground, Tinbergen concludes that “[t]he receptive side of instinct has not yet been thoroughly studied in man” (Tinbergen 1951, 208).

Supernormal Stimuli

The Neolithic sculpture, *The Venus of Willendorf* is widely considered to be the first known supernormal stimuli object. This fertility goddess carved as an overflowing votive figurine, accentuates the female breasts, buttocks, and belly in exaggerated form. Meant to elicit the abundance of spring, Venus figurines present some of the earliest recorded figurines, and their overflowing form is pregnant with instinctual meaning.

Supernormal stimuli yank us outside “nature’s parsimony” which balances hormones and controls urges within a healthy limit (Cross and Proctor 2014, 7). The Neolithic revolution of agriculture around ten thousand years ago for the first time allowed sedentary lifestyles and paved the way for the beginning of the accumulation—and over-accumulation—of stuff, ushering in humanity’s first encounters with obesity (Wright 2005; Cross and Proctor 2014).

To turn their trick, supernormal stimuli amongst humans rip substances outside their natural and cultural contexts that otherwise bind their excess and dangers through rites and ritual. Supernormal stimuli override biological and ecological constraints or limits, so that natural variation ranges no longer apply and shorthand selecting mechanisms, how organisms skim or gloss reality, become unleashed to seek the biggest, brightest, most stimulating version possible. Absent from such frenzies is the concept of “too much.” Refined sugars and hydrogenated oils work in habit-forming ways, releasing powerful hormones and neurotransmitters which overpower our senses. In ways not previously possible, liberated from their ecological constraints, food and other stimuli became addictive with the rise of industrial culture.

The tectonics of human habitation and sense-making face a vertigo of impressions with the recording and reproduction of image and sound, catapulting our slow-evolving physiology into a hypertunnel of cultural evolution, often overwhelming those first introduced to these new thrusts of technology into the world (Cross and Proctor 2014). In addition to the chemical component of supernormal stimuli, the onslaught of advertising with its propensity to oversell the virtues of a given product tends “to raise expectations and dull sensibilities for ‘unpacked’ stimuli, be they nature’s wonders or

unaided convivial and social delights”(Cross and Proctor 2014, 14). Already in the 1920’s, commercial product designer Dwiggin stated that the “thing inside the box is of less importance than the box” (Cross and Proctor 2014, 48). Supernormal stimuli are designed to “transcended nature’s limitations” (Cross and Proctor, 56). Indeed, the trope of naughtiness or transgression, spoiling oneself or being free from self-imposed or societal limitations, figures prominently in the history of advertising products from candy bars to cars. Amusement parks, for example, are aimed to release “psychological and physical tensions, just as the traditional saturnalia had done—but in a manner far less threatening to authorities” (Cross and Proctor 2014, 238). Channeling emotions and tensions into “acceptable rebellion” neutered from actual challenges to the existing social order, has long been an aim of savvy marketers (Hendlin et al. 2010).

Advertising and its products mimic functions that they are unable to synthesize because their makers have not even begun to conceive of the vast nuance and synergistic effects of undetectable functions. So-called human enhancement products engineered and sold to supposedly enhance health—in specific, single-metric ways—are perhaps the most quixotic of supernormal stimuli. Genetically modified foods to deliver more vitamin D, energy goop packets overloaded with caffeine to help scholastic performance and salvage procrastinated deadlines, vitamin-infused waters coming in BPA plastic bottles, dieting fads, elective surgeries, and other temptations dangled from the breadth of corporate culture from pharmaceuticals to clothing, all promise health without the receiver needing to change their lifestyle or habits. They offer more consumption as the solution to the chronic diseases of overconsumption. Just as selecting for a single trait in animals can cause adverse effects, i.e., Golden Retrievers’ tendency for hip dysplasia (Haraway 2008; Haramia 2014), so too a new gadget designed to help our attention span, posture, or other aspect of our failing bodies too often takes a single-goal approach, and may end up upsetting a host of other body, mind, and social functionings in order to relentlessly achieve its stated aim (unsurprisingly, this is also one of the dystopic elements of artificial intelligence). Unintended consequences of an engineering approach to health and human life result from reducing life to “functions,” which are imagined to be unilaterally manipulable with isolated repercussions. Much like the valves and tubes humours model of human bodies popular in medieval science, the reification of analytical models ends up crippling organisms in strange and unexpected ways.

The latest form of supernormal stimuli is the individually targeted or “microtargeted” ad. As marketers have realized that different cultural images and messages resonate with different subgroups, advertisers in the last few decades have become increasingly interested in psychographics, rather than merely demographics. Demographics impart information like age, sex, and marital status, while psychographics can parse whether a given individual is introverted or likes to party, or is sympathetic to environmental issues. Paired with the advent of big data—information bought and sold through personal profiles gleaned from social media sites, mobile phone data points, emails, text messages, and virtually every other trace we leave in the digital world (and increasingly through telebiometrics, traces of our existence we unwittingly “share” in the physical world as well)—psychographics allow advertisers to “get in your head” and predictively advertise to you online products they think you’ll be interested in at any given moment. In a

2016 speech, Alexander Nix, the CEO of the microtargeting big data run ad company Cambridge Analytica, explained the company’s methodology: “We’ve rolled out a long-form quantitative instrument to probe the underlying traits that inform personality. If you know the personality of the people you’re targeting, you can nuance your messaging to resonate more effectively with those key groups” (Illing 2017). As *Wired’s* recent article “It’s the (Democracy-Poisoning) Golden Age of Free Speech” mentions, “the core business model underlying the Big Tech platforms—harvesting attention with a massive surveillance infrastructure to allow for targeted, mostly automated advertising at very large scale—is far too compatible with authoritarianism, propaganda, misinformation, and polarization” (see Fig. 1) (Tufekci 2018).

One way to distinguish supernormal stimuli from regular stimuli is their demand on our attention. Michel Serres writes, “*Imperious images and letters force us to read, while the pleading things of the world are begging our senses for meaning. The latter asks; the former command*” (italics in original, 2010, 51). Supernormal stimuli are “imperious” because they seek to grab the attention of those encountered in a violent, commanding way; whereas unassuming objects “plead” with the world, “begging our senses for meaning.” The element of force and coercion is lacking in encounters with regular stimuli, whereas supernormal stimuli marionette our emotions, not giving us a choice. Regular stimuli invite, offering the freedom to choose. The violent and drug-like metaphors of advertising, in which the ad “hits” the eye of the audience with overwhelming emotional images, are no coincidence.

When advertising became weaponized through television and then digital media, it created “corporate walled gardens” that herds users of “free” services

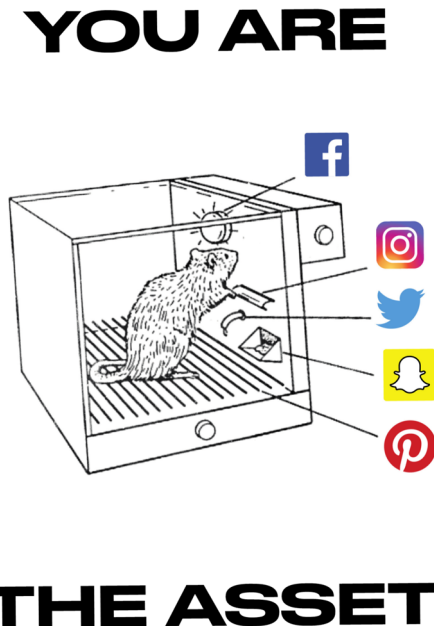


Fig. 1 “You are the asset.” *Adbusters: Journal of the Mental Environment*, March 2018 Issue. Creative commons

like social media into narrow routines of exploring their world and the world of ideas (Glaser 2018). The much-criticized algorithms of Facebook, Twitter, and other social media services that feed users self-reinforcing views, do so because news-as-supernormal stimuli sells better than news that might challenge people's beliefs (Garz et al. 2018). As a result, in the digital age, the reality check of the public square (*Zócalo*) is erased. This systematic ignorance, what Proctor (2008) terms *agnotology*, reinforces perverse or harmful beliefs rather than exposing them to the light of scrutiny and public discourse. Mockingly, such closed-loop news and discourse meant to predict a users' wishes also prevents genuine semiotic niche construction, instead selling the acceptable versions of pseudo-niches and micro-trends, all algorithmically curated for maximum engagement in the circumscribed medium.

If packaged pleasures are "programmed" (Cross and Proctor 2014, 282), what are they programmed for? And who is doing the programming? The extended evolutionary synthesis contends that evolution is not random mutation, but cross system effects like group selection and redundancy in DNA information and niche construction emerge via multiple organisms to reinforce certain selections (Noble 2008; Laland et al. 2015). This is the exact opposite of profit-seeking amongst industrialists that mimic semiotic ecosystems through offering top-down controlled diversity. J.B.S. Haldane in *The Causes of Evolution* (1932, 77) explains that "individuals differ by causes other than natural selection, and in consequence evolution can follow only certain paths." Our epigenetic landscape is being canalized in very particular, myopic ways. Manipulative market-based technoculture, fraught with single-trait selection, is not conditioning us for the good of the overall ecosystem; it is exploiting us as expendable objects in its profit machine.

Advertisers and the marketing industrial complex seem largely unaware of the semiotic damage and dependency they are causing. Instead of freeing us to pursue our desires, our desires become unmoored, generated exogenously and latching on to preexisting cultural protrusions geared to snag our instincts. Like synthetic drugs that puzzle-piece-like bind with receptors in our cells, this latch-and-key system of superficial stimuli plug our aspirations without actually delivering the goods these receptors were designed for.

Examining what he describes as "Exo-Darwinism" (p. 37), Serres (2010) asks regarding global warming and other global disasters, "do these catastrophes occur 'naturally,' without anyone being accountable?" While Serres defines the "hard pollution" we are familiar with as the physical destruction of the biosphere "material abuse," novelly he names "soft pollution" as messaging abuse. Just as physical pollution invades and occupies space and commons, colonizing our air, water, and soil, so too does abusive messaging colonize our eyes, our ears, and our minds. This appropriation of what is not properly theirs to take, bought and paid to a third party arbitrating over our environment for the rights to blare consumptive messaging, infects and evacuates the native respite of mind and perception. Serres writes of soft pollution as the "tsunamis of writing, signs, images, and logos flooding rural, civic, public and natural spaces as well as landscapes with their advertising" (Serres 2010, 41). Both physical and mental pollution arise from "the same soiling gesture" for Serres, "from the same intention to appropriate... from the same drive" (Serres 2010, 41–2). Like "a vile skirt-chaser whistling after

a woman, the manufacturer scatters his products and advertises their supposed excellence shouting as loudly as possible,” Serres writes (Serres 2010, 42). Advertisements make a claim on our space and time, presuming our attention, monopolizing our perception and infecting us with their taglines, logos, and hooks (what the Germans call *Ohrwürmer* or “ear worms”). “Like filthy admen,” Auden wrote, “we soil the world by leaving our traces everywhere” (c.f. Mendelson 2014). Serres is not being analogical or literary when he refers to the noise of mental pollution—advertising—as “excrement” (Serres 2010, 46).

But there is another side to the deceptive mimicry of monological advertising pretending to be communication that Serres identifies; not only are advertisements subversive of autonomy by hooking people into their products, stories, and addictions, but they are also exclusive, leaving those who can’t afford those pleasures (like the 1000€ smartphone) out in the semiotic cold. Those not privy to inside information available through the select channels of marketing are left in a semiotically-disadvantaged place vis-à-vis the types of cultural capital of small talk conversation in professional situations. After all, the so-called “Forth World” are not only those countries without raw materials capital wishes to capture, nor merely an unskilled workforce, but this epithetic designation is primarily applied to *populations too poor to buy the wares of transnational corporations*—in short, there is no “market” there because their purchasing power does not compare to the global “standard.” Parallel to this exclusion, Serres points out the hypocrisy of besmirching poor neighborhoods with hard and soft pollution while the rich live in the hills far from dirty air or advertisements. Those well off financially can pay for the ad-free version of the app, and live amongst green spaces without invasive billboards. Just as Steve Jobs’ children perhaps scandalously were raised in comparatively luddite conditions without screens compared to most eyes-glued-to-the-screen kids from which he made billions selling his widgets (Alter 2017), those who make the weapons refuse to let their children play with them. Those who start the wars refuse to fight them. Those who advertise insulate themselves from their own propaganda. These are the technological draft-dodgers, running away from the very panoptic monsters they create and profit from.

How to Break a Mimetic Loop: Surréflexion and Play

It is easier to diagnose the problem of degenerative mimicry in humanity than to resolve it. Illuminating well-travelled paths that circumvent the semiotic enclosure of degenerative semiosis, however, gestures at the possibilities. The cultivation of particular signs is of the utmost importance in a species endowed with the capacity to meaningfully reflect on the type of signs it produces. Meditating on the effects and affects of signs enables a critical theory of mimicry. Maurice Merleau-Ponty’s (1968) identification of the activity of *surréflexion*, thinking about thought, provides such a method of subverting the seemingly totalizing effects of supernormal stimuli.

What makes *surréflexion* methodologically unique, is that it eschews the paralyzing analysis of strange-loop situations, and instead mounts a *detournement* of the classically western reflective stance. “Excessive self-consciousness,” McGilchrist (2009, 450)

writes, “like the mental world of schizophrenia, is a prison: its inbuilt reflexivity—the hall of mirrors— sends the mind ever back into itself. Breaking out of the prison presents a problem, since self-consciousness cannot be curbed by a conscious act of will.” McGilchrist nonetheless maintains that paradoxically “conscious reflection, the root of the problem, may itself provide the antidote to its own effects,” and points out the consistency with which “Heidegger, Wittgenstein, and Merleau-Ponty, all of them critics of reflection, embodied in their writing a reflective attempt to surmount reflection” (McGilchrist 2009, 450). Merleau-Ponty conjectures in *The Visible and the Invisible* that the intense self-reflexivity of *surréflexion* could act as a corrective to self-consciousness’s tendency to not take into account its own effects. By becoming aware of their own overbearing presence in altering or diffracting phenomena as they apprehends them, individual consciousnesses become aware and are given the opportunity to intentionally shift their own proclivities.

Ironically, as humans, in recognizing the limits of our autonomy and inspecting the depths of our automaticity self-sovereignty can be regained. Theravada Buddhism teaches practices that enable any human to iteratively prevail over addictions to craving, aversion and ignorance—the roots of all human suffering—through observing bodily sensations without reacting to them. Observing triggers and habits of the mind equanimously, the nervous system can recalibrate out of knee-jerk reactivity, and instead is able to attend to life in realtime, moment to moment (Goleman and Davidson 2017). Both *surréflexion* and play stretch and adjust grooved imperceptive tendencies.

When keyed towards prosocial and evolutionary advantageous reflexes, the paradox of instincts instructs that living according to their direction is profoundly helpful in freeing up energy, leaving plenty of stored energy to accomplish diverse tasks and advance knowledge. When instincts become deleteriously crystalized, however, they lead us serially astray. In such cases, we must exert tremendous energy and concentration through our frontal cortex to will and reason to override previous poor conditioning. In such cases, it is “not antihedonistic to rein in, or redirect, instincts,” Barrett (2010, 177) reminds us; humans are designed to derive possible pleasure from a myriad of sources, and how gross or refined that source is does not attenuate the subjective experience of pleasure. The racecar driver does not experience more pleasure, or adrenaline, than the acrobat. But the former is burning fossil fuels that cause climate change, and acclimatizing herself to loud sounds that numb certain other capacities for pleasure. Referencing Tinbergen’s work on the preference of starlings to give preferential brooding to bigger, more flashy colored eggs even if they were fake and would not produce offspring, Barrett (2010, 177) writes, “We are the one animal that can notice, ‘Hey, I’m sitting on a polka-dotted plaster egg’ and climb off.”

In order to combat the semiotic grey goo² of replicating memes and commodities requires a firm meta-cognitive approach to sign use and respect for place. To avoid remaining under the spell of the supernormal stimuli of exaggerated comforts and engorged sensory engagements, reflecting on the utility and veracity of deceptive mimics of the things that really bring us happiness can be productive. Rather than take

² Grey goo is a dystopian end-of-the-world scenario in which out-of-control self-replicating nanobots (nanotechnology robots) – through design or accident –metabolize the entire material world (engaging in ecophagy, or eating of one’s environment) to fulfil their programmed endless replication.

the bait advertising and propaganda offer our instincts, we can detach. Such detachment, however, does not require privileging a

‘cognitive’ approach to doing good over an ‘affective’ one. The detachment isn’t slowly, laboriously thinking your way to acting compassionately as an ideal utilitarian solution—the danger here is the ease with which you can instead think your way to conveniently concluding this isn’t your problem to worry about. The key is neither a good (limbic) heart nor a frontal cortex that can reason you to the point of action. Instead it’s the case of things that have long since become implicit and automatic—being potty trained; riding a bike; telling the truth; helping someone in need. (Sapolsky 2017, 552)

The last section of Niko Tinbergen’s *The Study of Instinct* focuses on “The Ethological Study of Man.” Tinbergen analyzes “the almost universal misconception that the causes of man’s behavior are qualitatively different from the causes of animal behavior” (Tinbergen 1951, 205). “Somehow it is assumed,” he writes, that “in investigating behavior, one climbs higher and higher in the hierarchical structure, ascending from reflexes or automatisms to locomotion, from here to the higher level of consummatory acts, and to still higher levels, one will meet a kind of barrier bearing the sign ‘Not open to objective study; for psychologists only.’ It is of fundamental importance to recognize the utter fallacy of such a conception” (Tinbergen 1951, 205). Tinbergen conveys how that despite our best efforts at commanding our organism and controlling our frame through reason and will, such powers cannot compete, ultimately, with instinct.

Tinbergen’s work in ethology uniquely focused on how animals adapt to the ecologies they inhabit. His attention to the plasticity of animal evolution and behavior can be seen as the ontogenetic extension of Darwin’s original thesis: Life adapts to its environment, and evolutionarily hardwired instinct arises from certain ecological and social contexts. What Tinbergen attended to in more detail than Darwin, was not just how instinct was geared to increase fitness, but how instinct in many cases could be abused or hijacked in ways detrimental to organisms. If a species’ *umwelt* suddenly drastically changes, then innate responses guiding action that might previously have been advantageous on the whole for survival, suddenly become liabilities. The metaphor of punctuated equilibrium, borrowed from complex systems theory (Gunderson and Holling 2002), can be useful here to explain the massive die-offs of the passenger pigeon, woolly mammoth, and other creatures. Attending to the effects of a rapid phase change in *umwelt* also holds for the instinctual unfitness plaguing industrialized humankind.

The political implications of supernormal stimuli reconcile current nerve-wracked populations afforded few satisfactory outlets for dealing with the addictive tendencies they gained second-hand from an advertising-based semiotic culture. One antidote, play, serves to reorganize the addictive neural and behavior paths programmed by supernormal stimuli.

Jesper Hoffmeyer’s (1997) take on play as activity carried out or on for its own (intrinsic) purpose, implies the element of enjoyment, that no exogenous stipulation or survival pressure need be exerted to motivate the action. Play in all animals, and even

possibly in plants, is a mechanism that leads to learning, but is not driven by an imperative to learn. Learning happens by the wayside, as an epiphenomenon of the play itself. Bateson defines play as “the establishment and exploration of relationship” rather than the affirmation or rejection of any particular agenda (Hoffmeyer 2008, 197). Bateson (2000, 203) writes how the punch line of a joke “compels a re-evaluation of earlier signals which ascribed to certain messages a particular mode (e.g., literalness or fantasy). This has the peculiar effect of attributing mode to those signals which had previously the status of that higher Logical Type which classifies the modes.” Play and humor thwart rigid hierarchies of value, and allow putting even our dearest truths into a meta-discourse where their status qua useful or good or true becomes thrown into question becoming perspectival. Yet, unlike in reflection (but not *surréflexion*), which may permanently judge or condemn social structures and asymmetries, in play everything can be up for discussion precisely because finality or permanence is not affixed.

In play, the suspension of the need to abide by preexisting social rules permits behavior disruptive of the social order under the pretense of humor or entertainment. The blank space that play offers opens the aperture of cognitive-behavior possibility, and alludes by synecdoche to the elements absent from existing semiotic systems (Hetherington and Lee 2000). Such openings in habit allow a safe space for exploring the boundaries and breeches possible—conceptually, physically—without such actions leading to ostracism or death. For Bateson, play is the “exploration of relationship,” rather than ritual, which is the “affirmation of relationship” (Hetherington and Lee 2000, 151). Play permits a creative destruction, whereby exploration slowly erodes the iron grip of hegemonic semiotic frameworks deleterious to organisms and their *Umwelten*.

Vis-à-vis advertising, one example of play includes the practice of subverting famous brands or trade images through *détournement*. *Détournement* is the process of refiguring the constellation of identifying characteristics of advertisements, and subverting the message with this resemblance. The reappropriated semiotic commons involved with the process of *détournement*, which emerged out of the political group led by Guy Debord, the Situationists, reclaims the semiotic territory that brands colonize, and instead makes plain the arbitrariness of purely symbolic and sometimes dissonant associations between products and images (Knabb and Paul Avrich Collection (Library of Congress) 1981). The “subvertisement” (subverted advertisement) erodes the cultural capital of a corporation’s brand, and in its best exemplars, portrays the hypocrisy and externalities (both conceptual and physical) of the corporation’s actual impact. The ability to “go beyond our social identities and see society as experiment rather than contract” (Rajchman 2000, 20) provides the possibility of participating more actively in the creation of the conventions governing our built *Umwelt*.

Conclusion

As all species curate their environments, so too do humans. This engenders stability and dependability, creating salutary effects for reflective action and refinement. When in the course of a few generations new forms of environmental stimuli arrive, significant amounts of time and energy must be expended by organisms to come to terms with the new rules governing their changed semiotic system. While the dawn of

advertising brought us snake oil salesmen, these high-flying promises for cure-alls had limited impacts, as each charlatan was locally constrained; plus, they did not systematically peddle a suite of necessary other wares. General paid advertising brought us the smoking epidemic and others through convincing consumers that a particular product would confer coveted characteristics, such as “liquid courage,” coolness (social status), or sexual prowess. Targeted advertising, refined digital reproduction techniques, and Big Data surveillance presents a semiotic milieu in which the moment we begin to communicate or investigate a certain subject, such as travel, tailored paid advertising offers us exactly what we were looking for, but didn’t realize.

Evolution selects upon a myriad of traits and aspects, allowing slack, redundancy, and diversity to create resiliency. Over eons organisms have evolved in particular *umwelten*, which, whatever their challenges, generally did not systematically dupe their inhabitants. If water smelled bad, it was likely not potable. If it smelled sweet, it would likely unproblematically quench thirst. Play and deception kept organisms on their toes, but systematic deception is rare in nature, and even then eventually organisms become wary of such specific mimicry. Because of the rarity yet indispensability of encountering other organisms like us, we and many animals developed responsiveness to facial structure, with the cognitive side-effect of face pareidolia, the evolutionarily beneficial false-positive fit of seeing faces in our surroundings, even when there aren’t any physical beings there. This is supported by error management theory. Yet, with the rise of raging market economies with psychological research to microtarget consumers according to the individual predictions, we hit an evolutionary wall. Far from diverse selecting, society in the age of big data-driven microtargeted advertising confronts a serious mimicry “problem in that packaged products have been engineered, manipulated, and marketed for the singular purpose of maximizing sales and profits with so little regard for social and bodily consequences” (Cross and Proctor 2014, 272).

While geography once constrained the amount of damage a given sign-system regime could wreak on the species, with the globalization of western culture and the “disaster capitalism” of transnational corporate control (Klein 2008), the problem is now the rest of the world is trying to emulate developed countries (Cross and Proctor 2014, 271). We will all have drunk from the well of degenerative signs, believing we are now sane, and decrying those protesting the progress and development of the marketing economy as insane.³

Compliance with Ethical Standards

Conflict of Interest The author declares no conflict of interest.

³ The parable of the king and the poisoned well spins a tale of a wise king who ruled lovingly and powerfully over his vast kingdom. One night, the main well that the entire kingdom drank from was poisoned with a powerful neurotoxin. The once pure waters now imparted disorientation and confusion. The following day, the people all drank from the well, but not the king, who had his own private spring. Whereas the people’s allegiance to their king was previously unquestioned, now people grumbled about the king’s poor decision-making and strange behavior. Soon, their clamoring that the king had gone mad became so intense, that plans were laid to dethrone him. The once serene king grew fearful. He was faced with a difficult choice: risk death by the hands of his beloved subjects or drink from their poisoned well and become mad in their manner. The following evening, he ordered a golden goblet to be filled from the well, and he drank deeply. The next day, there was great rejoicing among the people, for their beloved king had finally regained his reason.

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