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Biopower, Biopolitics, Biosemiotics: Entangling Mortalities and Moralities

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See table of contents

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Article abstract

While biosemiotics moves in the direction of liberating both biology and semiotics from strict observance of the paradigms of the 19th and 20th centuries – via evo-devo-eco models and the ontological turn – we propose a glance backwards as well as a sharper focus on the social and sexual conditions of the present and foreseeable future. We bring together contemporary discourses on feminism, biophilia, biophobia, essentialisms, and denial, with the prescient ideas of biopower developed by Michel Foucault with respect to the nation-state. He addressed a bevy of pathologies endemic in the societies he witnessed at that time; these conditions persist and indeed have flourished, ranging from sexism, to racism, to classism, to technologism, to the outsourcing of work and the exporting of refuse, to the addictive mantra of “sustainability”, all culminating in society’s exercising of power over both life and death, both living and dying, both near and far. We also find biopower a suitable critical lens for pursuing the pathologies surrounding population – population as generated, as regulated, as ignored, as denied, whether or not acknowledged as being the work of wombs.

Biopower, Biopolitics, Biosemiotics : Entangling Mortalities and Moralities

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Introducing the *Dramatis Personae*

We bring into conversation three observations – about the nation-state, about mortalities, and about moralities – with three observers on the modern condition : Foucault, Arendt, and Agamben. Together, these productively inflect contemporary discourse in and on semiotics and biosemiotics. First, the nation-state as a historically recent invention may be terminally strained at its seams. As to mortalities, the human species may well be uniquely aware of its own mortality, shaping the aptly-labeled human condition's attitudes about life and death, while resisting discomfiting foresight when it comes to any trade-offs between the well-being of lives and the quantities of population. As to moralities, issues of equity, and even of "inalienable" rights, privileges, and responsibilities, will be inflected by local histories. Still, we emphasize that moralities are more fundamental than ethics; contemporary discourse throws up a smokescreen of ethical concerns about matters minute and vast, without pointing out or admitting that these ethics will be both culture- and language-bound, being constructed, tamed, and domesticated in codes : witness the oxymoronic discussion around "sustainability". In contrast with ethics, moralities have deeper roots in time and wider and wilder reach in space, sometimes even transcending species. Moralities are kept alive by common-sense, remaining unmarked until brought into awareness.

Biology is a specialized practice of our single species, even as we all

blindly exude and are immersed in livingness at every scale in space and time. Our species, like many other macroscopic species, is sexual, social, and mortal. Human cultures shape the gendered organization of societies, both foregrounding, transcending, and defying what might otherwise be expected simply from "biological" sex. Finally, culture and society cannot be reduced to "biology", any more than "livingness" itself can be. Still, perhaps "bio-" may be justified as a prefix in "biopower", "biopolitics", "biosemiotics".

Human sociality also self-organizes variously when it comes to the size of communities and the expanse of their *Umwelten* (*cf.* Uexküll 1956 [1934]). Over the past ten millennia, an increasing proportion of humans found themselves subsumed, first by elastic heterarchies (*cf.* McCulloch 1945; Goldammer *et al.* 2003) and then by plastic but potentially brittle hierarchies (*cf.* AP3A 1995; Fairtlough 2005). These structures insinuated themselves into lived experience – being progressively accepted, expected, unmarked, and not apt to be reflected upon, let alone tinkered with, for thousands of years. The only indelible faculty, in societies across geographical space and through historic time, is that of women, more specifically their wombs, that both enable and limit the survival and perhaps expansion of the group, be it family or tribe or nation and whether felicitous or not (*cf.* Miller 2007, 2017).

In prehistoric and broaching historic times, energetic substrates continued to provide a moveable feast for our ancestors' shorter lives, even though the quantity of lives increased as the quality of life diverged between those better or worse off, based on status conferred by birth (ascribed) or/and by skills (achieved). Starting five millennia ago, a finite number of "city-states" emerged around the globe. The hundreds unto thousands of inhabitants in these bureaucratic and guild centers, now distanced from fields and flocks, left corporeal evidence of their disparate lifestyles; the health (indexed by skeletal remains) and even wealth (indexed by control over essential resources) of "the many" had deteriorated when compared with their agricultural kinfolk beyond the city-state, and even when compared with their earlier gathering and hunting ancestors in the same regions (*cf.* Bertman 2003; Harris 1977; Hassett 2017; Scott 2017; Steward 1955; White & Dillingham 1973; Wattenmaker 1998).

Then or soon thereafter, on the brink of history (enabled by writing) and up into our era, some city-states launched dynastic "civilizations" that left for archeological research literal texts alongside those of art and artifact, rather than mere evidence of habitations and special-purpose architecture. Inter-individual disparities continued to widen, and quality of life overall decreased. The centers with their ranked specialists subsisted on the provisioning countryside – food and raw materials came into the urban centers in exchange for protection, regulation, and manufactures moving outwards. This corresponds with systems

generally, where "energy" moves up, in this case into the city-state, and "information" as regulation moves down, in this case outward toward the hinterland, knitting together more extensive interdependencies (*cf.* Leick 2002; Kriwaczek 2010).

As documented by Jared Diamond (2011[2005], 2012), many such centers came to collapse, with or without rising anew. Typically, a collapse indexed a mix of advertent and inadvertent factors : ecologic insults, climate change, imbalance of friendly and unfriendly neighbors, and inadequate buffering by political, economic, and sociocultural forces, indeed bureaucracies, localized in the centers. Periodic localized collapses have seldom impacted the overall global population, but the extent of the mid-14th century Black Death has been well-documented (*cf.* Byrne 2004).

Fast forward to a few hundred years ago : human populations steeply climbed even as resources were depleted, and the longer lives of survivors allowed for more differentiation in experiential and absolute well-being than could have been anticipated or even imagined (Adams 1988; Brody 2001; Ingold 2000). Humans "invented" the sovereign "nation-state" as a place-holder for wise, beneficent tribal elders; humans thereafter became "citizens" (*cf.* Hobsbawm 1997, 2012[1991]). Meanwhile, with and without implicating the nation-state and its antecedents, and while becoming ever more mutually-dependent, humans have generated runaway bureaucracies, designed famines, allowed poverty, invented war, promulgated homicide, ethnocide, genocide, sociocide, linguicide, even suicide (*cf.* Ferguson, R.B. 1990; Ghosh 2016; Harari 2017; Mishra 2017; Nixon 2013; Scheidel 2017; Sim 2017; Stuurman 2017).

These conditions of dis-ease underlie the contemporary reactive viral notion of "sustainability" (*cf.* Anderson 2011). The United Nations devised Millennium Developmental Goals for 2000 and then Sustainable Development Goals from 2015, and the Gates Foundation and others now focus on Grand Challenges. Funding earmarked for specific projects makes such initiatives more than boardroom self-promotion. Glancing over any list of their concerns reveals a bewildering array of good intentions. The several genres of goals and grand challenges overlap with respect to aims of decreasing poverty and also hunger; to abolish them would evidently be too ambitious, so we are left to problematize the distinction(s) between poverty and hunger, a sobering lesson. All these ambitious projects conceive of promoting education, gender equality, individual health, and the fighting of disease. Individual benefactors enter this arena as well; in 2016 the Chan Zuckerberg Initiative pledged three billion dollars to cure and/or prevent (and/or just "manage"!) "all" disease by century's end (Chan Zuckerberg Initiative 2016). Alas, success in any of these ventures can only exacerbate the steadily increase in population, and in the growth rate of population, without mention of any antidote.

The first round of U.N goals in 2000 enumerated just eight goals. By the second round of U.N. goals in 2015, there was already an infrastructure : the U.N. Development Programme. The eight goals have also blossomed, to 17, these embracing a number of the grand challenges whose concerns are more global, less individual, and decidedly "international" if not also magical; this magic is signaled by the introduction of "sustainable" in the new title, U.N.D.P. Sustainable Development Goals. These more recent goals foreground collective "security" – about clean water, energy supply, economic growth, innovation, sustainable cities, and responsible consumption and production. Further goals go on to suggest that societies can be enlisted for global partnerships in "sustainable" "development".

The very possibility of sustainability draws our attention to the contraspecifics in our *Umwelt*, yet for urban dwellers, the built environment precludes survival of many other creatures or even weeds – although one must reflect on the fact that *Homo sapiens* qualifies as a weed par excellence! Biophilia did not have to wait for Edward O. Wilson's volume of that label (1984; *cf.* Abram 2010). Societies have long been grounded in as well as on their "natural substrates", inclusive of other living species. *Umwelten* consist in "significant surrounds", although determining with precision "significance" will have to be put aside for the moment.

Biophobia, on the other hand, we first notice during modernity, although earlier societies could be breeding-grounds for culture-bound fears, taboos, waste, discord, and sacrifice as well, and indeed they all indelibly degraded their ecologies (Goldsmith 2014 [1998, 1992]; Merchant 1989). The ensuing literature first generated, then critiqued dichotomies such as nature-nurture, biology-culture, inheritance-learning, and many more, distinctions at last now indelibly fused given the dynamics around epigenetics (connecting individual with external ecologies through time) and the microbiome (connecting individual with internal ecologies across space), and a welcome spate of critical thinking across the disciplines.

Biophilia and biophobia discourses continue apace, but seem deaf to each other. Biophilia as a philosophy falls short of fully characterizing our global conditions today, and can seem to be satisfied with patting us humans on our own backs; biophobia tends to stop with a litany of short-sighted flaws in our ecological relations among and between individuals, classes of people, societies, and their wider, inclusive, *Umwelten* (e.g., Haraway 2016; Wolfe 2012) all this before mentioning capitalism (*cf.* Moore 2015; Payne 2017). Technophilia and technophobia literatures take up where biophilia and biophobia leave off (e.g., Graeber 2015; Harari 2017; Princen 2005; Reynolds 1991), the narrowing distinctions between technology and humankind coming under increasing scrutiny in posthumanism and transhumanism (Haraway 2016) and also as exercised empirically by synthetic biology (Roosth 2017) – all anticipated

by Foucault and other social critics.

Finally, someone notices : perhaps it was just the click at the turn of the millennium? (*cf.* Anderson 2001)

Now well into the 21st century, we outline three essentialist notions implicating the nation-state, mortalities, and moralities, then draw in the prescient 20th-century discourses launched by Foucault, Arendt, and Agamben. Finally, we ponder how to transcend these essentialisms, states of denial, and Pollyanna tendencies tilted toward optimism that too easily cancel out all of the above, leaving burgeoning populations of humans and others in the lurch.

Essentialist Confession Number One : The Nation-State as Unmarked Sovereign

While eschewing essentialism, the human species may indeed be unique. We leave aside the considerations of culture-language-cognition, to instead foreground : the nation-state – its invention, or was it a discovery (*cf.* Locke 2016[1689])? The nation *of* nature and the state of cultural creation – historical accidents fusing certain local genealogies with superposed governance forming kinds of superorganisms – now cradle each individual on Gaia, the planetary *uber*-organism (Lovelock 1979), there being any number of leaky levels and loose types of Chinese boxes in-between. While most thinkers assume that overarching structures will perforce impinge on the very essence of subsumed individuals, none other than Heidegger declared that "The highest actualization of human Being happens in the state" (2013[1933-1934] : 64). Orthogonal to any and all of these units exist explicit and implicit consortia organized around serendipitous conditions, in clans, clubs, casts, classes. The three 20th-century cultural critics will have more to say in our centerfold section. Thereafter, in the abortive closure, we can do little more than to quote another social critic, James Baldwin (1962a) : "Not everything that is faced can be changed. But nothing can be changed until it is faced".

Essentialist Confession Number Two : Mortality in Denial

Our species may also be unique given its singular awareness of, and denial of, its own mortality (*cf.* Varki & Brower 2013). This awareness has shaped the human condition by both enabling and limiting our imagination, ideas, and actions affecting life and death of ourselves, conspecifics, and still others. Again, James Baldwin steals anyone's thunder :

> Perhaps the whole root of our trouble, the human trouble, is that we will sacrifice all the beauty of our lives, will imprison ourselves in totems, taboos, crosses, blood sacrifices, steeples, mosques, races, armies, flags, nations, in order to deny the fact of death, which is the only fact we have. (1962b)

Biological "living" entities, even the unicellular, are not eternal, nor are their consortia, their institutions, their nation-states, nor their substrates. Persisting after our death are only some of our ever-malleable ideas, along with the recycled non-living constituents of our bodies that we inherited in our turn from stardust and dinosaur piss.

For the discipline of biology, "life" or "livingness" has been the unmarked given, taken for granted rather than for interrogation, let alone for investigation. There have been allied disciplinary quests to postulate "origins" of life (*cf.* Margulis 1971), or to understand life contra "artificial life" (*cf.* Langton 1997), or to speculate what initial conditions could precipitate life qua "synthetic biology" (*cf.* Danchin 2009). These constitute special movements decorating the edges of biology.

In contrast, biosemiotics asserts itself as a center unto itself, promoting a model of ever-emergent "meaning-making" via the habits of signing, altogether potentiating livingness leading to "organisms" of any scale, within fuzzy and overlapping spatiotemporal dynamical units of analysis of *Umwelten*. Moreover, the "units" of analysis may better be apprised as processes rather than entities or even relations among entities (*cf.* Emmeche 2000), and the "units" increasingly may be idiosyncratic and the entities even endowed with "personalities" (*cf.* Carere & Maestripieri 2013). Overlapping and entangled *Umwelten* constitute the ecologies in our semiosphere, which itself can be extended and refracted infinitely in all directions of space and time, if only in our imaginations.

Just as all "units" including *Umwelten* are open or at least leaky systems, biosemiotics easily accommodates fresh insights from biology irrespective their scales in time or space – from microbiome to epigenome to evo-devo-eco approaches. Already 20 years ago, Stephen Jay Gould (1996) surmised, given the planet's saturation with bacteria and archaea, that other organisms would all amount to "superorganisms" (Sommer & Bäckhed 2013), basically open ecologies in themselves, and that those minuscule first-comers would also be the last to depart our planet. Meanwhile, our own species has spread itself almost as far and wide as those microbes, while remaining oblivious of our tenure in the cosmos.

Biosemiotics can also readily appreciate that our subject matters themselves are shaped by the linguïcultural habits and histories of its practitioners – potentially radically so (Anderson & Gorlée 2011; Durst-Andersen 2011). Consequently, many vague and general factors dance to chance in what amounts to a continuing evolutionary emergence engendering surprise; interweaving with this dance are developmental movements exhibiting loose sequential patterning from initiation to closure, their intermittent reinforcement engendering suspense (Salthe 1993). Peirce anticipated this discourse, asserting that :

> Symbols grow. They come into being by development out of other signs ... A symbol, once in being, spreads among the peoples. In use and in experience, its meaning grows. ... (Peirce CP 2.302; *cf.* Merrell 1996).

It is not only symbols that grow; we return to considering the post-neolithic growth in human numbers later in this essay.

Essentialist Confession Number Three : Morality in Denial

Morality attracts little discussion, other than the reluctant admission that some aspects of the deeper structures of morality are shared across species, such that a capacity for empathy and a sense of fairness are evident in a number of mammalian species and throughout humanity (*cf.* Bekoff 2009; Bloom 2013; Greene 2013; Narroll 1983; Tomasello 2016). Contemporary discourse centers instead on ethics – those sets of explicit, surface-structural and linguiculture-bound codes tied to particular times and places; ethics are constructed and then modified by ordinary mortals, whether inspired by moralities or not, and are often written, when writing is available in the socioculture. More general normative ethics do reference a philosophical notion of morality, but without acknowledging any biocultural substrate. The invention, or discovery, of "semioethics" may or may not expand our comprehension of these self-conscious practices (ethics) or more fundamental faculties (moralities) (*cf.* Deely 2007).

Among the deeper moralities shared across the linguïcultural societies of our species, some remain unmarked until brought into awareness (e.g., when someone is perceived culpable for a mortal accident), while others are kept alive by routine habit and by common sense (e.g., the "do unto others" golden rule). We recognize the morality around fairness when it comes to the greater good, the population (Bloom 2013), yet we experience a taboo in expressing that concern. In brief, all the international, federational, and institutional "bodies" generating lists – of "goals" and "grand challenges" about the health and well-being of all individuals in all societies – conspicuously avoid mentioning population, that is, human population size, limits, or constraints, let alone some judgment of overpopulation. One exception, though a very unusual one, would be Zero Population Growth (ZPG). ZPG was launched in 1968 in the time of Paul Erlich's *The Population Bomb* (1968), but since 2002 it has a new label, ironically, of PC (for Population Connection) (*cf.* Meadows *et al.* 1972). The rebranding addresses manifest public unease around the transparent initial label of ZPG, even by sympathizers, especially when Erlich's dire predictions of population collapse fell wide of the mark.

The Erlich's have rewritten their book as *The Population Explosion* (Erlich & Erlich 1990), appropriately adjusting their predictions. This work is now in line with other concerned scientists and public intellectuals, such as Yuval Noah Harari (*Homo Deus : A Brief History of Tomorrow* (2017)), Brenna Hassett (*Built on Bones : 15,000 Years of Urban Life and Death* (2017)), and E.O. Wilson (*Half-Earth : Our Planet's Fight for Life* (2016)), all defying the taboo by declaring the planet to be in a state of human overpopulation.

Progression With or Without Progress With or Without Sustainability

Signs grow, as noted by Peirce and by Merrell, and so do human populations, with varying awareness of their substrates, alive and inert. Of course, the inert, once cognized, is scarcely inert. Consciousness, culture, and life are actually all endowed with a Midas' touch of sorts – besides being intimately connected. Livingness renders all it touches more like itself, not necessarily in its negentropic "evolutionary" complexion, but certainly in its material, entropic, "developmental" one, where it behaves in accordance with the second law of thermodynamics (drawing again on Salthe 1993).

These expanding, ever-differentiating human communities and their encompassed individuals with their social institutions, gradually distanced themselves from their non-human resource base – those ingredients sustaining their lives – the plants and alloanimals, and the "minerals", in their "significant surround". While populations were limited and nomadic, that is for many hundreds of thousands of years, serial nominally "sustainable" local ecologies enabled a seasonal dance for subsistence.

Not until ten thousand years ago (the Holocene, approximating the justifiably contested Anthropocene (Anderson 2017)), when populations began to rely primarily on domesticated plants and animals, did settlements emerge around cultivated fields, and groups developed specialties for the production of food, of tools, of shelter, of storage facilities. Eventually further specialties emerged, these into hierarchical structures but not so much for the production of anything other than themselves – which is to say for the maintenance of these same structures : bureaucracy in military, in sacred priesthoods, in secular kingships, sometimes with these functions fused, all being manifestly developmental processes (Aveni 2006; Diamond 2005; Salthe 1993).

Fast forward to this millennium : At every level, individuals (now each a citizen within a nation-state), to communities (localized or from common interests), to those nation-states themselves and to their consortia, for example, the United Nations – have increasingly signaled their awareness of social pathologies while also being subjected to the planet's precarious predicament, as these conditions exacerbate each other. (This literature is huge and loud; here we cite a token few : Callahan (2016); Catton (1980); Orr (2004[1994]; Wilson 2016).

The planet could represent our ultimate and ur-*Umwelt*, our most expansive "significant surround". We and our "significant others" – from close kin to vast landscapes – find our singular and collective mortalities mediated by moralities as never before.

Human projects, both global and local, presume to address the alarms from our planetary substrate as they amplify via the social sphere, and back again. However, even were sustainability imaginable

in a shorter term, a probing of all variables reveals that an otherwise sustainable society will collapse if inequity is high (Motesharrei *et al.* 2014; Payne 2017). The plot thickens; not only is a sustainable quantity of lives beyond calculation, so is an equitable amalgam of qualities of life (Harari 2017). We do not dwell here on any juncture for a Capitalocene (Moore 2015) within an Anthropocene, as it seems our species has not hit upon any adequate formula for marrying collectivities with their substrates, despite many glances over the fences of time and space to fortuitous Others we might emulate (*cf.* Danowski *et al.* 2016). However, the dedication of capitalism to the indenturing of both labor and consumers has always been an easy target for critique. The Japanese have pushed the closure of these developmental loops to an art form in *chindogu*, an "unuseless" novel tool whose use creates more problems than it solves (Kawakami 1995, 1997), which is to say it is designed to serve no purpose except to be sold…and to be soon discarded! The assumption of "progress" in the course of history, once just Pollyannish or ethnocentric, now seems worse than quaint (*cf.* Anderson 1996).

The most prominent contemporary top-down initiatives addressing the ills from person to planet have been already mentioned : the United Nations' two 15-year plans for Millenium Development Goals and Sustainable Development Goals, and the various sets of Grand Challenges arising from several sponsors, including the Gates Foundation (2003, 2014) organized in initiatives, via rounds, and with collaborators. We observe two patterns in these well-intentioned and even well-supported programs. First, each list recursively and cleverly includes itself as a goal or challenge : that is, in addition to improving health and combating poverty, along with other aims, there is commitment to the maintenance of the larger project consisting in the rest of the list, however modest or lengthy.

There are also sometimes overlapping movements concerned with social justice that self-organize more from the bottom-up, seldom spanning separate nation-states even when similar issues are tackled. In the U.S., these touch on the quality of life (e.g., child labor, sanitation), and of death (e.g., the death penalty itself), as well as the quality of lived experience for persons in categories of subjugation (e.g., from human trafficking, immigration, segregation by any criteria).

What is consistently *missing* from all these lists intending to ameliorate or solve our increasingly felt social and environmental precarities is any judgmental mention of population itself. In fact, to the contrary, population is uncritically assumed to grow, along with GDP and GNP.

This taboo – not virtual, but actual – on evaluating increasing population as a deterrent to the welfare of both the individual and corporate body can now be framed as another essentialist universal about the human condition. The consensual silencing of our thoughts actually becomes an anti-moral stand, as we deny our moral voice to call for re-

consideration of our exuberant habits of procreation, first of bodies and collocations of bodies, thence of things, consequently of refuse, including "refused bodies", all at the expense of our substrates and … each other.

Biopolitics as the *Bioregulation* of the State

Michel Foucault Considers the Nation-State

Michel Foucault and other thinkers relevant to our argument seem to track, qualitatively, the dynamics of anticipatory systems described by mathematician and semiotician Robert Rosen (2012[1985]). Rosen demonstrated not only biological processes to be anticipatory systems, but all cultural phenomena as well; they are recognized as inextricable, given epigenetics, the microbiome, and more (Jablonka and Lamb 2014[2005]), illustrating Aristotelian "final causation" (*cf.* Salthe 2016; Stevens 2015 : 53).

In Foucault's lecture series "Society Must Be Defended", given at the Collège de France in 1975 and 1976, he introduces the term "biopolitics", understood as a new form of power as control over life (1975). Among other things, it involves topics ranging from power of sovereignty to power over life – the shift from human as body to human as species as the birth of biopower – population as biopower's field of application.

Although Foucault did not continue to explore this topic explicitly in his later works, we still find some variations of it – such as the concepts of "life", "knowledge", and *gouvernementalité*. These concepts all developed under the umbrella of a general theory of politics understood as a shift in power to control life, to control data and information, accumulating the latter to knowledge and to *gouvernementalité*, a term indicating the desire to rule. *Gouvernementalité* manifests the control over individual life, with its two branches : the human as a mere object, hence as data provider, and then the population as massed data. With these terms, Foucault explores and reveals the power of biopolitics as an omnipresent and multicentric process.

Since Foucault's introductory thoughts, the concept of implementing biopolitics through technology of power has also found its way into various disciplines including the fields of anthropology, sociology, political science, bioethics, and interdisciplinary research areas. He also anticipated Big Data, now even embraced in some quarters of the humanities, for instance digital humanities (*cf.* Moretti 2007).

As Foucault explains, the emergence of biopolitics or biopower goes back to a transition in modernity by which the state increasingly took over the regulation of the biological, hence, of human life. In fact, this process goes back to the 17th century, where biopower understood as the ability to rule over life, infiltrated politics and societies and had considerable impact on its development as a regulating instrument of power.

Foucault identifies this as a modern concept of political power that has successively replaced the power of the religious and of the secular. Whereas secular monarchies had the power to let die, biopower, the modern bio-control, developed power over life, meaning to let live. Specifically, it allows lives to be subjected to political and artificial selection favoring the ultimate nation-state.

From modernity's intractable investment in control, emerged a new form of violence that has its origins at the beginning of the French revolution, a period called the time of "terreur generale", the ultimate radicality of a "Reign of Terror". This period of ultimate collective violence following the French Revolution, was also marked by mass executions of political opponents. Contemporary discourse is saturated with concerns about terrorism instilling terror from without the society. While problem-oriented, the discussion tends to bog down in description, complaint, and blame. More analytical critics drawing on Foucault point out the degree of terror that is routinely imposed from within. Achille Mbembe suggests that biopower itself may not be sufficiently comprehensive to deal with the "necropolitics" he finds propagated within, without, and between nation-states and state-actors, in the subjugation of both individuals and collectivities whereby these may live, but only in a liminal state of "living dead" (Mbembe 2003 : 40), awaiting as it were that final cause.

Foucault writes : "Should one then turn around the formula and say that politics is war pursued by other means? Perhaps if one wishes always to maintain a difference between war and politics, one should suggest rather that this multiplicity of *force-relations* can be *code* – in part and never totally – either in the form of "war" or in the form of "politics"; there would be here two different strategies (but ready to tip over into one another) for integrating these unbalanced, heterogenous, unstable, tense force-relations" (Foucault 1975 : xviii). Foucault points out that biopolitics has established a new state-body, a manifold body with multiple heads, it "deals with the population, with the population as political problem, as a problem that is at once scientific and political, as a biological problem and as power's problem" (Foucault 1975 : 245).

The resulting overlapping redundancies lead to an ultimate molding of the structural-analytical and relational-political entities, into a conglomerate of state control. Biological patterns are eventually transformed into political strategies. Beyond the political system one finds "(C)control over relations between human beings insofar as they are *living beings*, and their *environment*, the milieu in which they live; this includes the direct effects of the geographical, climatic, or hydrographic environment : the problem, for instance, of swamps and the epidemics linked to the existence of swamps throughout the first half of the nineteenth century" (Foucault 1975 : 245).

Despite the juxtaposition with war as the regulation of relations between humans, the essential feature of biopolitics persists to be the

power over *life* – the life of individuals as well as the well-being of a collective population, and for better and worse. On the one hand, the nation-state inclined toward socialism will anticipate many of the needs of citizens, even as it may preclude through regulation the carrying out of other perceived needs, such as abortion, assisted suicide, or a living wage, however variously articulated in separate traditions. This comes up for comment when we get back to contemporary agendas of social justice.

In summary, Foucault classifies Biopolitics in three different branches that we consider as his contribution to deconstruct the political consequences of this emerging form of power :

> 1. A branch that deals with the *population*, "with the population as political problem, as a problem that is at once scientific and political", as a biological problem, as well as power's problem.
>
> 2. A branch that deals with the *nature of the phenomen*a that are taken into consideration – this being the collective phenomena that have their economic and political effects, and that only become pertinent at the mass level.
>
> 3. And a branch of biopolitics that deals with the *technology* of power, which introduces mechanisms such as forecasts, statistical estimates, and overall measures very different from traditional disciplinary mechanisms. (Foucault 1975 : 245-246)

Foucault elaborates :

> Unlike [traditional] disciplines, [the new branches] *no longer train individuals* by working at the level of body itself […] in the way that discipline does. It is therefore not a matter of taking the individual at the level of individuality but, on the contrary, of using overall mechanisms and acting in such a way as to achieve overall states of equilibration or regularity; it is, in a word, a matter of taking control of life and the biological process of person-as-species and of ensuring that they are not disciplined, but regularized (1975 : 246-247).

In other terms, while family and community "tame" the individual, the state "domesticates" entire collectivities (*cf.* Rorty 1976; Salthe 1993).

Hannah Arendt Considers Mortality

As a further step to substantiate the term *biopower* and reveal its inherent mechanisms concerning the human condition as a biological condition, we introduce Hannah Arendt's concept of bios, or life in a direct dialectical relation with mortality. Arendt also relates bios with the law of growth as an inborn process; to explain this she introduces the term *vita activa*, in which she integrates essential human activities : "With the term *vita activa*, I propose to designate three fundamental human activities : labor, work, and action" (Arendt 1958 : 7). Furthermore, Arendt considers all three activities including their corresponding conditions, as intimately connected with the most general condition of

human existence : birth and death, natality and mortality.

However, of the three categories within the *vita activa*, the category of *action* exhibits the closest connection with the corresponding human conditions, that of natality; as the new beginning inherent in birth asserts itself by the mere capacity of the newborn to begin with its life, which is always a new *vita activa*, hence an action to start again. Arendt views all human agency embedded in this sense of initiative, which bears an element of action, and therefore of a potential in natality. Moreover, since action, an intentional endeavor itself, is a political activity par excellence, natality – which could be considered as an equivalent to Foucault's "letting live" – and not mortality, proves itself to be the central category of genuine political action as opposed to and distinguished from metaphysical thought.

Perhaps we rely on a woman to bring up natality and all it entails, an important prod to the gender-neutral philosophizing by Foucault and Agamben? Yes, there are women who do not fear to tread on this territory, marking it for a biopolitics and biosemiotics of the uterus (Cerwonka & Loutfi 2011; Miller 2007, 2017). But these scholars could have also built on the work of Michael Thompson, a student of Mary Douglas, who, in *Rubbish Theory* (2017[1979]), pointed out how women, in society as well as in biology, harbor the eggs of possibility that only realize value upon their being anointed by sperm. This situation mirrors the stories of contemporary gentrification, where the real estate is often owned by widows, and the worthless contents of their homesteads transformed to priceless antiques by a glance from the male entrepreneur.

Giorgio Agamben Considers Morality

Giorgio Agamben likewise confirms this substantial transformation of political power. In his book, *Homo sacer : Sovereign Power and Bare Life* (1998[1995]), he, like Foucault, describes the shift of politics on life as a genuine modern process and as such a shift of power over territories to power over population.

Agamben exemplifies this with the example of *Homo Sacer*, a figure derived from archaic Roman law, a character who has been banned and excluded from the religious community and from all political, hence active life. *Homo Sacer* was defined as a being who was deprived of participating in the rites of his people, nor had he any right to be protected by their juridical system. Hence, his entire existence was stripped of every right given that anyone could kill him without being at risk of being accused of committing homicide; the only way for *Homo Sacer* to be safe and stay alive was to flee to a foreign territory with all the consequences of divorce from ordinary cultural activities and habits, such as language, rites, social status, essentially existence itself. How this resonates in the contemporary world, with both individuals and whole ethnic groups in voluntary and involuntary motion, the latter now inclusive of not just

refugees but a whole new category of slaves.

With the example of *Homo Sacer*, Agamben reveals a further relation between the concept of power and life : power over life leads subversively to power over language, hence to control life is also to control language. Here we witness a *semiotic dependency* between life, language, and logos, as the living creature rules on logos and expresses himself within it. *Homo Sacer* "is in a continuous relationship with the power that banished him precisely insofar as he is at every instant exposed to an unconditional threat of death". The new technology/technique of power modeled in biopolitics, he argues, "has to qualify, measure, appraise, and hierarchize, rather than display itself in its murderous splendor" (Agamben 1998[1995]).

However, Agamben also offers a corrective to Foucault's theory : sovereign power, he writes, is itself already biopolitical, based on the constitution of bare life as the threshold of the political order. Unlike Foucault, Agamben declares the emergence of the technology of biopower not as a *break* in the history of Western politics, but as the ultimate expansion of the enduring biopolitical imperative of the state. As bare life moves from peripheral existence to the center of the state's concerns, it forms the political order where the exception increasingly becomes the rule.

Life, Living, Thriving, Surviving, or Not

Biopower Dances with Procreation

In this 21st century, our planetary substrate consists in a mosaic of nation-states, *and* each human will be an object of, an object for, a subject in, and subjected to at least one sovereignty (or more, and definitely when travelling). Not every nation-state may recognize itself in the mirrors thrown up by Foucault, Arendt, and Agamben, nor will every citizen, in either first-person experience or third-person reflection. In some western countries, individuals may identify more as employees (or, now, unemployed) than as citizens. Yet we proceed; patterns obtain at both levels : the sovereign and the citizen.

First, the type specimen citizen is definitely not female, in any nation-state (Cerwonka & Loutfi 2011; Miller 2007, 2017)! The nation-state, through organization and regulation of citizens and other inhabitants may produce any number of things, but not more citizens, without the incubating wombs of women (Graycar & Morgan 2002). Differentially for women and men, reproduction has been, variously, a right, a privilege, a responsibility, besides, of course, an accident. Many citizens don't think twice about the implications of petitioning the local bureaucracy for a license to marry! Of course, reproduction may be initiated outside the sanctioning bureaucracies within the nation-state, but once born, the new citizen will be registered, vaccinated, schooled, conscripted,

taxed, buried. In-between, the nation-state expects labor, good behavior (inclusive of procreation), and a solvent death.

These observations are consonant with the fact that women find themselves more regulated than males, insofar as they are also regulated as the owners of wombs. Ironically, persons in marked categories regarding gender (LGBT+, for LGBTQQIA, lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual) have confronted resistence from heteronormative society regardless of their stance toward procreation. The nation-state may find itself schizophrenic around the matter of procreation – the only situation in which the sovereign is literally a dependent variable! At the same time the sovereign will be rewarded with one more set of vital statistics and demographic variables.

That procreation is not just normal, but normative, is evident in numerous languages, where, as in English, to be "childless" is semantically as well as behaviorally marked. In the ledgers of the nation-state, any child (unto adult) will be both asset and liability; what the bookkeeping entails is first to reduce the body to a number, or several, the better to regulate with (Hacking 1982, 1990). Moreover, the newly born belongs first to the state, secondarily to the parent(s), family, kinfolk. In the U.S., that appears ratified in the behavior of families subjected to dire economic straits, when they allow local governments to "take possession" of their offspring. Until the 1960s, there were still some institutions to accommodate surplus children, but these were phased out by the 1970s, when such children were deemed better served by placement in foster families (Weisman 1994). This system is haphazard and inadequate, as are most other warehousing and/or inculcating institutions of the typical state, whether out-sourced or not : kindergartens, schools, asylums, prisons, hospitals, nursing homes, hospices – all places where both minds and bodies are regulated, not just accumulated.

Biopolitics Subjected to Virtual and Intentional Communities

For the sake of safe argument here, we choose to consider rights, privileges, and responsibilities to have arisen, ratified by the habits of collectivities including the nation-state, before any individual citizen came on the scene. And it is to those collectivities that citizens petition for departures from and immunities to the nation-state's edicts allowing the sovereign to "let live" and "let die" : specifically, to let live, to kill, to let die.

In the U.S., as a convenient example, there are numerous social movements wherein the citizen and collectivities claim further rights to well-being : from sanitation and control of toxins to better nutrition and health care; from equal treatment of certain categories of individuals to special treatment; from accelerating culture-cum-technology change to resisting or even moving toward self-reliance; from natural resource conservation to a regime of rationing; from subsidizing defenses against

climate change to denying it. And then, there's freedom of movement and migration, an enduring habit of our species. From some angles, the nation-state may portray itself as an intentional community, particularly given the preponderance of migration, voluntary and centripetal or less voluntary and centrifugal. Increasingly, a 21st-century nation-state will be comprised of virtual communities, and may be one itself.

Biopower Confronts Death

By direct action (war, capital punishment) and indirect action (class-based discriminatory practices), as well as by inaction at home and abroad (failure to notice, to declaim, to obstruct), biopower's association with real and metaphoric death and necropolitics continues unabated (*cf.* Mbembe 2003). Equally interesting are those social movements that contest the sovereign's right to let die or its control over death, such as : abortion, euthanasia, assisted suicide. In an increasing number of nation-states and other political units, the citizen or an agent of the citizen has already wrestled control from the establishment to have access to abortion, or euthanasia, or assisted suicide.

In each of these examples, the decrements to overall population are less significant than the respect afforded the *Umwelt* in perpetuity, and the savings in monetary costs, costs borne by both individual and collectivity, and over a longer period of time. However contested, a case in point concerns the puzzle of decreasing crime rates in the U.S. after 1991. The decrease was doubly puzzling : citizens were surprised at the statistics, and the statistics were not revealing any correlations or explanations. In 2001, Donohue and Levitt, a legal scholar and an economist, respectively, established through historical and statistical means that there was a correlation, specifically with the 1973 *Roe v. Wade* U.S. Supreme Court decision legalizing abortion, making it possible for more women to avoid birthing unwanted babies, babies who would otherwise mature in an unsupportive and crime-infested environment. The number of abortions may be slight, but the impact on society may be as significant as that on the individuals involved.

While a typical nation-state may be relaxing its control over citizen-initiated death, the sovereign has held onto more biopower with respect to tolerating and even nurturing intra-state class terror, and with respect to inter-state conflict.

Biopolitics Confronted by Umwelten*, or Gaia, or Vice-Versa*

Given the now publicized constraints on resources and their costs (food, water, shelter, then clothing, medicine, education), plus peak-oil a few years back, peak-soil about 10,000 years before present, and a newly announced (permanent) shortage of … sand(!) … the still increasing human population can expect some deterrence through famine(s), epidemic(s), and/or war(s) within the century (Diamond 2011[2005],

2012; Harari 2017). At the experiential level of the citizen, this translates as hunger-unto-starvation, sickness-unto-death from disease, novel categories of slavery, and intensified subjugation-unto-forced-homicide if not (what amounts to) suicide in battle. At this time, we can't even enumerate the number of wars or contemplate their impacts in any term. Populations survive within the constraints of an ecological-subsuming-cultural carrying-capacity that can be imagined, even if that's not calculable (Abernethy 1994; Dasgupta 1995), and any of these perturbations, however likely, also lies outside the model of carrying-capacity. Omnivorous Big Data either has blind spots or a very fussy appetite (or consumed by trivia, *cf.* Stephens-Davidowitz 2017).

What can be predicted *but is never projected* is any number of "perfect storms", with even "near-perfect storms" having dramatic consequences for persons and whole populations anywhere anytime. The literature is replete with research concerning prospective large-scale issues such as famine (e.g., Broadfoot 2017) (including reassuring mention of the Global Seed Vault (e.g., Fowler 2016)), communicable diseases old and new (e.g., Ash 2017, Enemark 2017), toxic environments (e.g., Nixon 2013; Shapiro 2017), and war, or at least wars (e.g. Roy 2003). The literature does not leave out discussion of smaller-scale and social justice issues, although these tend to be nuanced as to a cultural place and time, and difficult to weave in here.

As mentioned, the sovereign state is armed with statistics, and these are exercised to project *growth* in all things valued positively, from total population (or even rate of growth), GNP, GDP, and so on. Measurables that would fall on the debit side of the sovereign's ledger are those on the lists of the U.N. Millennium Development Goals (2000), the U.N. Development Programme Sustainable Development Goals (2015), Gates Foundation Grand Challenges in Global Health (2003), Gates Foundation Global Grand Challenges (2014), the Chan Zuckerbert Initiative (2016), and the more vocal of social justice initiatives.

Improvements in the deleterious conditions addressed by any of these initiatives to increase well-being, would positively feed back to augment population, while, at least with respect to the U.S., there are no policies to brake population increase. The prospect of a demographic transition (toward lower and balancing levels of births and deaths, responding to improvements in nutrition, sanitation, and healthcare) comes with no guarantee. Population control, as in China from 1979-2015, may involve surgical interventions, while Singapore addressed the same conditions through a mix of incentives and disincentives. Some nation-states, and in fact China, promote procreation regardless of any policy in the past. Various European states now experience decreasing populations, with a consequent voiced concern for "replacement", that actually refers to a traditional balance between the productive and dependent sectors/ages of society. This reflects an ideal model of a population continually

replenished by younger age-grades and moreover, ever growing, ever less-balanced within its *Umwelt*.

Enter Gaia, as imagined by biosemioticians James Lovelock and Lynn Margulis (*cf.* Anderson 1985). Unlike our *Umwelten* that are fuzzy sets of relations, ecologies inclusive of ourselves rather than environments, Gaia as our planet-cum-biosphere has been framed as more than an passive substrate. Together with its living inhabitants, Gaia's regulatry prowess may afford humans (and other living things) immunity of sorts (*cf.* Clarke 2017), but whether this applies to the population or just the species is not so clear. Biopoliticians sometimes behave as though they were banking on Gaia. It would be more prudent to invest in biosemiotic paradigms, such as ecosemiotics and the latest ecological models that subsume the "non-natural" : "The concept of ecology thus represents the center of a great transformation of the politics of concepts and theories ..." (Hörl 2017 : 3).

Biopower Inflected through the Optimism Bias : Ethics of Denial

Overall, the sovereign regulation of life and death too often still proceeds insensitive to citizen well-being, although there are bursts and pockets of agency and resistance on the part of citizens and citizen groups. The sovereign regulation of life and death has not been so responsive to citizen agency when it comes to the *Umwelt* and the longer-term thriving of growing populations; in fact, the nation-state seems invested in remaining oblivious to the ever-amplifying rate of increase of population. Population seems to always fall on the credit side of the ledger, without noting any cost or constraint on the other side.

The discussion of the nation-state as the first of three essentialisms, before mortality and morality, foregrounds its unmarked status in the contemporary world. Biopolitical assumptions have long since saturated all politics, and the average citizen may not explore any of the degrees of freedom available, may not engage in social justice movements, may not accommodate immigrants, may be politically inert, prompting fresh inquiries into the notion of "evil" (*cf.* Arendt 2006[1963]; Bergen 1998; Minnich 2016; Rorty 1976).

In short, the nation-state and its citizens accept projections of future population size as independent and indelible variables, not something to be controlled (Abernethy 1994), even as resources at the national, international, indeed planetary levels clearly will fall short, whether of food and water or of security and tranquility, while material accumulations of "refuse" and toxins soar to the point of impeding human habitation (Broadfoot 2017; Enemark 2017).

It may help in understanding the other two human exceptionalisms, phrased earlier as the denial of mortality and the denial of morality, if we bring in the optimism bias found in empirical studies, at least in

the West (*cf.* Sharot *et al.* 2007). It seems humans are cognitively tilted to expect any desired end, without regard to perceptible risks or even statistical ones (*cf.* Gould 1996) : the optimism bias simply, or not so simply, intensifies the well-known confirmation bias introduced by Peter Wason (Wason & Johnson-Laird 1972). The optimism bias will neither fully explain nor certainly excuse our collective denials of mortality and of morality (especially concerning (over)population), but it qualifies as one more mingling of consciousness, culture, and our living blue marble, our ultimate *Umwelt*.

In every empirical and philosophical venture, semioticians are reminded of an often unstated caveat : above any putative ontological grounding for discourse there will be diverse and often incommensurable historico-linguïcultural angles (*cf.* Durst-Andersen 2011). We happen to be writing, and sometimes also thinking, in English. This caveat introducing relativity need not be belabored, but it must be acknowledged. For example, we may never know whether any optimism bias obtains for individuals in linguïcultures distant in space or time, however pronounced it is for our Western and sometimes "individualistic" societies. Alongside the optimism bias, at least in the West, individuals are inclined to take personal credit for whatever that goes well, but blame others, or the system, for matters that are not so propitious; we also always assume that the Other is simpler, whether worthy of understanding or not (Kelley 1967; Prinz 2012; Waugh 1982).

Does a concern for the well-being of others, and everyone, on a planet most taxed by our population, warrant being classed as a morality, and, if so fundamental, how can it be blindly violated?

Denial might itself be the most indelible essential feature – yet dare we hope not essential but rather an inessential feature – of and for the human condition.

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Abstract

While biosemiotics moves in the direction of liberating both biology and semiotics from strict observance of the paradigms of the 19th and 20th centuries – via evo-devo-eco models and the ontological turn – we propose a glance backwards as well as a sharper focus on the social and sexual conditions of the present and foreseeable future. We bring together contemporary discourses on feminism, biophilia, biophobia, essentialisms, and denial, with the prescient ideas of biopower developed by Michel Foucault with respect to the nation-state. He addressed a bevy of pathologies endemic in the societies he witnessed at that time; these conditions persist and indeed have flourished, ranging from sexism, to racism, to classism, to technologism, to the outsourcing of work and the exporting of refuse, to the addictive mantra of "sustainability", all culminating in society's exercising of power over both life and death, both living and dying, both near and far. We also find biopower a suitable critical lens for pursuing the pathologies surrounding population – population as generated, as regulated, as ignored, as denied, whether or not acknowledged as being the work of wombs.

Keywords : Biopower; Biosemiotics; Essentialisms; Technology; Population; Michel Foucault.

Résumé

La biosémiotique tend à se libérer des paradigmes biologique et sémiotique stricts des XIXe et XXe siècles – recourant à des modèles écologiques, évolutifs, et développementaux, et en tirant parti du tournant ontologique. Nous proposons cependant un regard en arrière ainsi qu'un recentrage sur les conditions sociales et sexuelles du présent et du futur proche. Nous réunissons les discours contemporains sur le féminisme, la biophilie, la biophobie, l'essentialisme et le déni, avec les idées visionnaires de Michel Foucault sur le biopouvoir et l'État-nation. Foucault aborda une série de pathologies endémiques dans les sociétés dont il fut témoin; ces conditions persistent et se sont même accrues, allant du sexisme, du racisme, du classisme, de la technologie, de l'externalisation du travail et de l'exportation des déchets, au mantra addictif de la "durabilité", le tout culminant dans l'emprise sociale sur le vivant et sur la mort, sur l'acte de vivre et celui de mourir. Le biopouvoir se révèle aussi comme une lentille critique appropriée pour expliciter les pathologies qui entourent la population – générée, réglementée, ignorée, niée, reconnue ou pas comme étant le résultat du travail des utérus.

Mots-clés : Biopouvoir; biosémiotique; essentialismes; technologie; population; Michel Foucault.

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