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Life Problems: Ambivalence, Valorization, Validation

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Aspirations will unavoidably measure up against their materialization. The hope of an ongoing collaboration with the *Erasmus Student Journal of Philosophy*, at the inception of ESPhil's Masters Research Practice specialization, could not have developed more propitiously and it is with much joy that we announce today the journal's second special issue, devoted to the theme of life. On the heels of the Graduate Symposium *Life Problems: Ambivalence, Valorization, Validation*, organized on the 25th May 2022, with unwavering diligence, patience and care by Giovanni Prins and Sonia Shvets, the present special issue collates the research presented and discussed on the day. Next to the other three MA students and guest editors of this issue, Mark van Loon, Constantijn Kusters, Charles Smoot, we had the pleasure of welcoming as keynotes to the Symposium, the EUR emeritus Dr Henk Oosterlink, and the international scholars Prof Howard Caygill and Prof Havi Carel, who spoke in front of an engaging audience of ESPhil's postgraduate students and PhD candidates.

The theme of life is expansive, its manifold, elusive everyday uses carrying over into its under-determined, ambiguous and often ambivalent function within both theory and practice. The present project wishes thus to examine and valorize the under-determination of life within various discursive contexts. By weaving together different approaches to life within a single project, it seeks to concretize and extend discussions within these discourses, as well as tease out the commonalities and disjunctions between them, in order to germinate new knowledge. Indeed, the project's intention has been to take transdisciplinarity to its limit and show how ultimately, every object within philosophical discourse, becomes in its relation to the question of life, itself a question of 'life and death', demanding a valiant validation of the inherent value of every question. By bringing life to the centre of philosophical discourse, the latter must assume the responsibility of cultivating forms of knowledge whose value is centered around *lived life*.

The issue opens with Sonia Shvets's essay, 'On Naked Life and Its Form: Redefining the Fracture between *Zoē* and *Bios*', which pursues Agamben configuration of the notion of a form-of-life, in order to challenge a purely negative definition of naked or biological life and argue for its positive potentiality, an intervention with repercussions both for animal studies and ecology, as much as for biopolitics.

The political focus is sustained in the contribution of Giovanni Prins, 'Generating Two Modes of Life: a Biopolitical Reading of Asylum Seekers and Refugees', which demonstrates how Foucault's two distinct but intertwined genealogies of biopolitics result in state racism and market liberalism and the production of two modes of existence: bare life and precarious life. These two modes come together in the figure of the refugee, which Prins pursues in the biopolitical paradigms of Germany and Great Britain.

Mark van Loon's 'Hiding, Mutating, Spreading: Rethinking the Past, Present, and Future of Technical Life', opens a new dimension, by thematizing technics, 'the continuation of life by other means', as the latter seems to assume its own life. Working with Bernard Stiegler and Michel Serres, the essay revolves around the figure of the computer virus to show its potential not only for disruption, but also for a creative formation of collectivities.

The code of life is further scrutinized in the essay of Constantijn Kusters, ‘Signs of Life’. Combining biosemiotics and phenomenology, the essay explores ways of narrowing the gap between meaningful experience at the human scale and the code of microscopic life forms, showing how the first signs of life constitute the life of signs itself, while ecology emerges pregnant with meaning.

Charles Smoot’s ‘Defining the Moment of Death’, proceeds to query the threshold between life and death. Tracing the move from the cessation of cardio-pulmonary functionality to brain death as a medical criterion of death, the essay shows the limitations of the latter’s various configurations and the constitutive indeterminacy of the moment of death. Informed by Wittgenstein’s ‘family resemblances’ and Kripke and Putnam’s critique of descriptivism, the essay proposes a ‘fuzzy’, yet medically adequate, understanding of the moment of death.

The issue closes with an invited short contribution by Prof Havi Carel, who, in her ‘Illness as Epoché’, offers a further meditation on the implications of the finitude of human life, understood not only as mortality, but as more broadly as limitation, contingency and vulnerability. The essay argues that this finitude is not simply restrictive, but affords the conditions of possibility for human life and as such has creative and normative force facilitating growth and transformation.

Last year’s issue was composed under the shadow of the global pandemic; this year, the war in Ukraine weighed heavily in our thoughts. Meditating on life, this troubled yet effervescent stream of becoming, helped us sustain hope.

In closing, we wish to thank Georgina Dijkstra, the new Editor-in-chief of the ESJP for aiding, with a light horticultural touch, this collaboration to take roots. Her interest, attentiveness and generosity have been integral to the success of this issue and to the future of our joint research venture.

Dr Georgios Tsagdis
*Research Practice Coordinator
and Guest Editor*

About

The Erasmus Student Journal of Philosophy (ESJP) is a double-blind peer-reviewed student journal that publishes the best philosophical papers written by students from the Erasmus School of Philosophy, Erasmus University Rotterdam and from the Humanities Programme of the Erasmus University College. Its aims are to further enrich the philosophical environment in which Rotterdam's philosophy students develop their thinking and bring their best work to the attention of a wider intellectual audience. Aside from serving as an important academic platform for students to present their work, the journal has two other goals. First, to provide members of the editorial board with the opportunity to develop their own editing and writing skills. Second, to enable students to realize their first official academic publication during their time as a student at ESPhil or the Humanities Department of the EUC. A new issue of the ESJP appears on our website every January and June.

To ensure the highest possible quality, the ESJP only accepts papers that (a) have been written for a course that is part of the Erasmus University College or Erasmus School of Philosophy curriculum and (b) nominated for publication in the ESJP by the teacher of that course. Each paper that is published in the ESJP is subjected to a double-blind peer review process in which at least one other teacher and two student editors act as referees.

The ESJP encourages students to keep in mind the possibility of publishing their course papers in our journal, and to write papers that appeal to a wider intellectual audience.

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On Naked Life and Its Form: *Redefining the Fracture Between Zoē and Bios*

Sonia Shvets

Aristotle determines the good life as the aim of politics (Aristotle 1962, 1252b27-30). Hence, the notion of life has been an important element in political thought from the earliest stages of the Western philosophical canon. If we are to accept Aristotle's formula, we must understand what the good life is before setting political goals. To reach that understanding, one must first consider what is commonly meant by the terms "good" and "life," as well as the dimensions of these notions that get lost in the colloquial use. I am presently undertaking the question of life as it is the subject of the predicative construct "good life," and at least for the time being leaving the notion of goodness uninterrogated.

Following Aristotle, political philosophers have concerned themselves with the question of life. Giorgio Agamben is, I argue, an exemplary thinker to have taken up that task. Dissatisfied with the contemporary state of political thought, Agamben set out to seek "genuinely political paradigms" in the phenomena that mostly are not seen as political (Agamben 2000, ix). One of the central objects of his investigations is the duality of the conception of life, its apparent separability into the natural life and its form – the latter being essentially social or political life. This fracture is of the utmost importance for Agamben's philosophical thinking, as he posits the outcome of this separation to be the foundation of sovereignty (Agamben 2000, 6).

The object of the current inquiry is the question of whether natural life can indeed be isolated from a form of life. Agamben inaugurates the problem by noting that ancient Greeks had two separate words in place of the semantically unified "life" we use today. The distinction lies between life "common to all living beings" – *zoē*, also referred to as natural, naked, or bare life – and life "peculiar to a single individual or group" – *bios* or a form of life (Agamben 2000, 3).

I set out to gauge the exact criteria that may serve as the distinction between *zoē* and *bios*, naked life, and its form. In much of Agamben's own work – as I will demonstrate – the distinction between the two notions remains mysterious and abstract, warranting the present investigation. This calls for a novel interpretation of the division he establishes.

As will become clear, the problem of difference and separability of *zoē* and *bios*, naked life and its form, is a wicked academic question. At every turn of thought, it morphs and assumes a new shape, requiring new concepts to be introduced, and a new plane of thinking to be taken up. Therefore, it is precisely the meticulous and attentive introduction of the central notions of the problem that will bring about novel insights.

I am starting at the center of the posed issue: the explication of *zoē* and *bios*, naked life and its form, and, finally, form-of-life.

The Fracture

As already mentioned, for Agamben, the understanding of what life is and – more importantly – how we conceive of it, is important because of its connection to the notion of sovereignty. More precisely, he posits that *zoē*, bare life, is the foundation of sovereignty since only the one who can reduce others to mere naked – biological – life can be said to be the sovereign (Agamben 2000, 6). It is then important to understand

what bare life is. In the foundational essay “Form-of-Life”, the term seemingly represents the mere fact of existence, the “counterpart of a power that threatens death” (Agamben 2000, 5). In line with the generality of this explication, Agamben admits that the concept is opaque despite its political significance (Agamben 2000, 3).

Simultaneously, there are many forms of life normally – or theoretically – available to a person. One may be a child, an engineer, or a civil rights activist, each of these categories encompassing a specific form of life. As such, these are the peculiar ways of being and are referred to as *bios* by Agamben. The categories of the bare life and the many forms of life are crucial for understanding form-of-life, one of the central concepts in Agamben’s political thought. Form-of-life is both singular and abstract, thus not requiring definite or indefinite articles and not having the plural form. It entails an indestructible union of naked life and the many forms of social life which an individual or a group leads. It is such a life in which *zōē* cannot be separated from *bios*, the naked fact of living impossible to isolate in the peculiar form of living (Agamben 2000, 3-4).

Considering the complexity of the notion of form-of-life, I turn to Wittgenstein’s work on constitutive rules and the example of chess to further elucidate the concept.

Elucidating Form-of-Life

Essentially, a constitutive rule is “a rule that is not applied to a preexisting reality but constitutes it” (Agamben 2016, 241). The rules of chess, for example, are constitutive, as Wittgenstein points out. There is no way to define a chess piece other than through the rules of its movement: there is no chess piece prior to the rule since the latter effectively creates the former. A bishop possesses no essence upon which a rule can be applied, it is constituted by the rule of its movement. In other words, a constitutive rule is something that “constitutes the reality and thus seems to be identified with it” (Agamben 2016, 241).

Applying Agamben’s terms to this, the fact of being a bishop – *zōē* – cannot be separated from the form of being a bishop, which is the moving rules – *bios*. When the form is at stake, bare life is itself at stake: a bishop ceases to exist once the constitutive moving rule is taken away. It may remain a figurine shaped like bishops are often shaped, but without the rules, it cannot be called a bishop properly. Consider this: if a person who knows nothing about chess sees a bishop figurine without the context, they will not identify it as such despite the visual clues. There is no possibility for *zōē* to appear without there being *bios*. However, with the knowledge of the moving rules of a bishop, a person can create a bishop by applying the appropriate rules to it, effectively constituting the bishop’s identity. The rules do not even have to be applied to a physically subsisting body: it can be a set of algebraic notations commonly used in chess, in which the signifier *B* (bishop) can only move according to the vectors that represent diagonal patterns. In this case, the signifier *B* does not exist as a bishop without the constituting rule of moving like one. Once again, the *zōē* is inseparable from *bios*.

One may object that such a constitutive rule may not be applicable to human lives. Agamben, however, effectively counters this objection by considering the lives of Franciscan monks. He states that the Franciscan monastic order was so overwhelmingly structured by the rule that it was not separable from it: “The rule is not applied to life, but produces it and at the same time is produced in it” (Agamben 2013, 36). The monks were invited to essentially become the “living clocks,” with every action of every second of every day accordingly dedicated to a specific way of carrying the Divine Office. In such a way, the entirety of a Franciscan monk’s life was morphed to accommodate unceasing temporal articulation (Agamben 2013, 16). The threshold between bare life and the rule – the form – effectively disappeared, constituting a model example of form-of-life. The monastic rule is constitutive of the life of Franciscan monks. Agamben

effectively demonstrated how a person's or a group's life is capable of "ascending" to the ideal of form-of-life.

The Separation Enacted

Having illustrated the inseparability of *zōē* and *bios* in form-of-life, let us turn to an example of the opposite: of the isolation of bare life. This imaginary scenario explicitly and unambiguously refers to Agamben's characterization of form-of-life as a type of life where the way of living is inseparable from living itself (Agamben 2000, 4).

Imagine two political activists – A and B – in an authoritarian state. They both start receiving threats and are conscious that unless they stop their political activities, they risk being killed by the forces of an authoritarian regime. Activist A is terrified by this prospect and decides to comply and cease any political activity. Activist B however, decides that complying is as good as death and persists.

It can be said that in the case of A, their life was effectively fractured: the fact of A being alive became separated and opposed to the fact of A being an activist. *Zōē* was separated from *bios*. In the case of B, however, the fracturing did not occur. For B, the form of their life – the life of political defiance – is the same as the naked life itself, as the fact of staying alive at all. Such a life is the form-of-life that Agamben talks about.

From the example, it is also clear the way in which naked life becomes the foundation of sovereignty. It is only because for A bare life could be separated from the life of activism that the authoritarian regime got its way, managed to gain sovereignty over A. In the case of B, since naked life could not be peeled back and presented as a separate thing, the state did not become sovereign over them.

The Opacity of Bios

The example of the political activists A and B seemingly illustrates the possibility of separating life from its form. This however, is only true under the assumption that the opacity of the notions under investigation have already been surpassed. It is only true to say that *zōē* has been isolated from *bios* in A's case if the meaning of these terms has been somewhat established.

So far, *bios* has only been defined as some sort of social identity, a "manner of living peculiar to a single individual or group" (Agamben 2000, 3). If this is the case, it is unfounded to say that A's naked life got separated from its form. The form of life simply has changed from a political activist to – for example – a silenced political dissident. If the notion of a form of life is to remain synonymous with a social status or identity, then even a Jew in a concentration camp is not reduced to their naked life – unlike what Agamben says – since they remain a victim of a crime against humanity (Agamben 2000, 41).

I thus arrive at the major problem of the inquiry: because of the opacity of what *bios* is, it remains unclear whether *zōē* and *bios* are separable at all. Is it possible to effectively isolate life from its form? And if so, is this separation merely theoretical, or can one talk about the actualized reduction of a person to the mere fact of existence? The answers to these questions majorly depend on one's understanding – or the lack thereof – of what *zōē* and *bios*, naked life and its form, are. The opposition used at this stage of the inquiry – between biological existence and a social life – is demonstrably ineffective in separating them.

In search of the clues to solving the present problem, I turn to the discussion between Derrida and Agamben, where the former insisted on the impossibility of separating *zōē* from *bios*. Serene Richards' surveying of the Derrida - Agamben disagreement will also elucidate some mistaken assumptions that have been taken for granted so far.

The Fictitious Fracture

The Ontological and Rhetorical Separability

Derrida's central objection to the possibility of the $\zeta\omicron\bar{e}$ – *bios* separation is Agamben's overemphasis on the distinction between political and natural life (Richards 2019, 334). Interestingly, the term "political life" and the variations of the phrase "truly human life" are used interchangeably – a point that I will thematize later in the inquiry.

Derrida announces the ultimate inseparability of natural life and the life of a human being – between $\zeta\omicron\bar{e}$ and *bios*. He argues that Agamben's insistence on the possibility of their fracturing is the result of him misreading Aristotle. Specifically, Derrida references Aristotle's statement that man is political by nature. Such a formulation precludes the possibility of isolating the natural from the political (Richards 2019, 334). In discussing this argument, Richards concludes that Derrida is simply arguing on "a different philosophical and conceptual plane" than Agamben (Richards 2019, 338). According to her, Agamben merely points to the "delicate fracture" that exists in the Aristotelian schema of man as a political animal. For Agamben, what the division between *bios* and $\zeta\omicron\bar{e}$ makes possible is the *articulation* of a human and therefore a political life (Richards 2019, 338). She states that Agamben precisely makes the point that the realization of the $\zeta\omicron\bar{e}$ – *bios* separability is questionable and, as a result, that bare life is a fiction that results from the arbitrary character of the distinction.

It is apparent that Derrida and Agamben indeed are talking past each other. While the former points to the *ontological* impossibility of separating the natural from the political life of a person, Agamben explicates the necessity of the fracture for *articulation*, and hence conceptualization of what a human life is. The issue plaguing the misunderstanding is seemingly the difference between being (ontology) and saying (defining, articulating).

This interpretation is supported by Agamben's discussion on the Aristotelian distinction between "*saying* (to say of a subject) and *being* (to be in a subject)" (Agamben 2016, 117). In a rather typical way, Agamben points to the opacity of the terms that he claims Western philosophy has inherited from Aristotle, without offering the reader any hints to make sense of their exact difference. What is presently important, however, is Agamben's mindfulness of the saying – being distinction, which supports Richards' claim that he does not insist on the ontological possibility of separating $\zeta\omicron\bar{e}$ from *bios*.

It is now clear that I, just like Derrida, steered away from the right path. The example of the political activists A and B pointed to the ontological isolation of naked life from its form, the possibility of which was shown to be questionable. However, if such an isolation is some language trick, the sleight of hand used to fabricate naked life for the sake of sovereignty formation, then it is difficult to deny the possibility of rhetorical separability of $\zeta\omicron\bar{e}$ and *bios*.

The Real Consequence of Fiction

Furthermore, Derrida and I seem to share one more mistaken assumption regarding Agamben's work: the identification of $\zeta\omicron\bar{e}$ with bare life. As Richards points out, bare life is the product of isolating $\zeta\omicron\bar{e}$ from *bios*, and thus cannot be fully equated with either of those terms (Richards 2019, 338). This is evident from Agamben's discussion of the werewolf myth in his seminal *Homo Sacer*. To correct the path of the inquiry and to turn back to Agamben, let me survey this myth and take up the question of the $\zeta\omicron\bar{e}$ – *bios* difference anew, this time conscious of the mistakes made so far.

Agamben evokes the myth of the werewolf to explicate what he means by the sacred man, the *homo sacer*. "Sacred" here does not mean something holy, but rather something sacrificial: that which can be killed without juridical prosecution.

Half-man and half-wolf, the werewolf was excluded from the human community, from the city; because of his animalistic nature, he could be killed without consequence. Agamben emphasizes that a werewolf does not represent the pure animalistic and natural life that is in no way related to the city (*zōē*). Rather, it is “a threshold of indistinction and of passage between animal and man” (Agamben 1998, 52). He unambiguously states that this threshold is precisely neither natural nor social life, “but rather bare life or sacred life” (Agamben 1998, 53).

I propose that Agamben’s choice to invoke a myth corroborates Richards’ conclusion about his hesitation to insist on any ontological separability of *zōē* and *bios*. Just like the werewolf is a mythical creature, what it represents is also fictitious – bare life itself. After all, it cannot be ontologically enacted: a person always *is in a peculiar way* – *bios* is always present right next to *zōē*. However, despite the werewolf not being real, the sanctions to be applied to it – killing without juridical consequences – cross the threshold from fictional to actual. Murder without consequence is a fact of reality, that does get performed over mythical creatures that are *said* to be real: the “great evil puppeteers” who in reality are just Jewish, the “cunning perverts” who in reality are just trans people. I, therefore, propose the practical irrelevancy of the impossibility of *zōē* and *bios* separation “in reality,” since the consequences that await the one reduced to bare life are enacted in the real world.

This real dimension is impossible to ignore when one considers Agamben’s most vivid example of the isolation of bare life – camps. It is precisely in Nazi concentration camps where Jews, Romani, and queer people were stripped of their forms of life. The camp creates “a space for naked life as such” (Agamben 2000, 41).

The devastating reality of the fictitious *zōē* – *bios* separation leaves me unsatisfied with Derrida’s resolution to accept the implied unreality of the fracture. Evidently, after the articulation of naked life, there comes some actualized enactment of it; the concentration camp is real. I propose to search for some phenomenal thing or event that corresponds to the rhetorical distinction taking place and that, according to Agamben, grounds sovereignty. As I will demonstrate in the following section, Agamben’s attribution of inherent possibility to human life proves to be a statement worthy of examination in the course of the search.

Potentiality and Use

When elucidating what form-of-life means, Agamben describes it as a type of life for which “single ways, acts, and processes of living are (...) always and above all *possibilities* of life, always and above all power” (Agamben 2000, 4). As discussed before, the “single ways” of living that Agamben mentions is what he means by the many forms a life can take. Thus, the above quote communicates the inherent character of potentiality of any form of life. Form-of-life, which constitutes the impossibility of isolating bare life, is therefore the life of possibilities, where living itself is always at stake (Agamben 2000, 4).

Colloquially, we often understand potentiality as the freedom to exercise choice. This, however, is not the connotation that Agamben utilizes. “The form of human living,” even if it is as customary and traditional as it can be, always retains its status as a possibility. Form-of-life always retains potentiality, shortly, not because it can make choices, but because it coincides with its own potential. It *is* its potential. As such, there is no prior subject to which the potentiality belongs (Agamben 2016, 208). There is thus no subject-predicate distinction in the life that Agamben considers distinctly human (political). Form-of-life – the subject of human life – *is* its own potentiality.

As I briefly mentioned before, the constant conflation of form-of-life and the notion of truly human life stands out to me as questionable. Is inherent potentiality really only characteristic of the human life? Are

non-human animals deprived of this *zōē* – *bios* unity? If this is the case, we may finally get a grasp on the real difference – and hence division – between *zōē* and *bios* that is expressed phenomenally.

Starting with a standpoint that opposes Agamben's anthropocentrism, I turn to the work of Marchesini.

The Bodily Creativity

Criticism of Philosophical Anthropocentrism

Marchesini views the anthropocentric stance of much of Western philosophy as a sort of deeply rooted prejudice, one that is difficult to overcome. He traces this anthropocentric tradition back to Plato, who posited that non-human animals are characterized by exclusively functional predicates. They are unlike human traits and are instead automatisms: highly specialized and therefore make an animal their slave; "a bird is made to fly." In opposition to this, a human is gifted with non-specifically functional characteristics, thus being free and autopoietic (Marchesini 2015, 75-76).

Marchesini insists that depriving animals of freedom, in the way that Plato outlines, is nothing more than an intellectual operation that does not correspond to the observable reality of the lives of non-human animals. He points out that animals clearly recognize people and interact with us, awaiting a certain dialogue (Marchesini 2015, 77). Marchesini calls this Platonic anthropocentrism *philosophical anthropocentrism* and describes it as a "misguided dream" which, just as any prolonged dream, "will eventually turn into the worst nightmare" (Marchesini 2015, 76-77).

Umwelten

In criticizing philosophical anthropocentrism, Marchesini starts with considering Uexküll's idea of *Umwelt*, a predetermined living sphere of a non-human animal that it remains enclosed in. He posits the borders of an *Umwelt* to be predetermined: established without the input from the animal and remaining unaltered by the animal's activity. Because of that, the range of actions that an animal can perform is limited and, in this way, pre-determined by the virtue of the *Umwelt's* borders remaining unchanged. Furthermore, there is no outside world that contains the otherness that is characteristic to objects, since there is nothing beyond an *Umwelt*. Therefore, in the absence of objects, an animal is incapable of becoming a subject. Finally, different *Umwelten* are always separated, from which it follows that a person would never be able "to say what it feels like to be a tick" – we are simply not within a tick's enclosed living sphere (Marchesini 2015, 78).

Marchesini insists that both Uexküll's presuppositions are wrong: if we are to accept Darwin's theory, we must admit that resemblances exist between animals on three coordinates. To begin with, there are certain *universals* that are common to a multitude of species because of their usefulness in adapting to the surrounding environment. The ability to feel pain and move away from dangerous objects are among such universals. Further, there are *homologies* – characteristics shared by two or more species on the grounds of having a common ancestor. Finally, *analogies* are the inter-species commonalities explained by the shared selective pressures, like the same environment or type of food (Marchesini 2015, 78).

If we are to admit these three coordinates of similarities, we must recognize that *Umwelten* are not completely isolated life-bubbles, but are rather overlapping entities, "where the sharing space indicates a common life experience" (Marchesini 2015, 78). With this in mind, it no longer seems true that a person can say nothing about how a non-human animal feels. I can imagine that a bee feels a sort of pleasure when it drinks nectar. Marchesini calls this approach of starting from the space of commonality with animals *functional biocentrism*. This, he states, allows us to start thinking from the place of sympathy, centering the non-human subject's experience (Marchesini 2015, 79-80).

The framework of functional biocentrism in itself is not the key to the problem of the alleged lack of potentiality of non-human animal lives. Its importance lies in the possibility of recognizing animal experiences, in establishing the ground that allows us to talk about them. The consequence of this grounding discussed further is crucial for reaching the aim of the current inquiry.

The Body and Creativity

When one starts from functional biocentrism, one recognizes that all animal life “has its own coordinates of pleasure, suffering (...) and so forth,” since all animal life is characterized by “being a body,” and mental life results from physiological factors (Marchesini 2015, 80). This common ground that comes with being a body serves as the inter-species Rosetta Stone, allowing us to articulate non-human behavior in our own terms. To start drawing parallels with Agamben’s thought, it is the being-a-body that can be considered *ζῶε*, the element that is common to all life.

Further, when an animal adapts to its environment, we can recognize that it does not remain a mere slave of its functional predicates. Rather, it “bends its own coordinates to the here-and-now”: its actions are informed and influenced both by its past experiences and by its anticipation of the future (Marchesini 2015, 80-81). From this, it is clear that the animal is not enslaved by its function-specific predicates, as its own experience morphs its actions, endowing it with subjectivity. This adaptation to the here-and-now using one’s experience is called creativity. Creativity, then, is characteristic to all animal life, albeit it is expressed differently in different species (Marchesini 2015, 81). All that is required is a body. It would then seem like creativity, when it is considered as action and not merely contemplation, can be equated to *bios*, a specific way of living.

We have seemingly arrived at another dead-end: if creativity is not separable from being-a-body, the *bios* – *ζῶε* distinction continues residing in the dimension of language rather than being; the phenomenological correspondence that I set out to search for has not been found. This is the case until we consider that, like Marchesini pointed out, one’s ability to observe animals’ creativity requires *Umwelten* to be considered as overlapping living bubbles, rather than completely separated living enclosures. Phenomenally, then, one’s creativity would completely disappear if one was placed into an enclosed *Umwelt*, unable to interact with objects or other *Umwelten*. What is being taken away in such an enclosure is the *communicability* of creativity: there is no one to communicate it to. It is at all questionable if creativity as a phenomenon continues to exist if there is no one to bear witness to it. After all, Marchesini himself characterizes creativity as “not an expression of detachment but of love and harmony, of interest deriving from being surprised, enchanted and fervent in the world” (Marchesini 2015, 82). It then follows that if there is nothing around to harmonize with or be surprised by, creativity effectively disappears. Creativity requires communicability.

This is demonstrably true: as long as we are stuck in phenomenological anthropocentrism, unable to start the dialogue with a non-human animal, we are unable to recognize its creativity, effectively reducing it to a body fully determined by its functionally specific predicates. Only upon the adoption of functional biocentrism, which urges one to consider the commonalities of all bodily life and therefore to recognize the centrality of an experience of a non-human subject, is one able to see the form of the animal life encapsulated in the animal’s creativity.

I then hypothesize that, although in the “normal world” *bios* and *ζῶε*, being-a-body and creativity are inseparable, one can forcefully be placed in an *Umwelt*, which then effectively isolates the fact of being a body from a form of living that is expressed in creativity. The clearest and most extreme example of such an occurrence is being placed in solitary confinement: a person remains a body that eats, drinks, urinates,

and defecates, but there is no thing and no body that is there to witness any expression of creativity that the body is in principle capable of. *Zoē* gets separated from *bios*.

This echoes Agamben's own thoughts on form-of-life. For him, it is *thought* that constitutes form-of-life and therefore the indestructibility of the *zoē* – *bios* union (Agamben 2000, 9). He in turn characterizes thought as something inherently communal. It does not reside in the isolation of an individual, but can only exist among those who communicate it (Agamben 2000, 9-10).

The conclusion that after the fictitious separation of *zoē* and *bios*, the stifling of creativity, of commonality occurs is complementary to Agamben's own thinking. The phenomenal mark of the camp is the effective reduction to being a body that is no longer creative, the actions of which are pre-determined, that is stripped of the potentiality that inherently resides in its form. This reduction is routinely performed with non-human animals, and can also be enacted on humans. Human life gets fractured once one is enclosed in an *Umwelt*, the walls of which do not let the sound or the light through.

Identifying *zoē* with being-a-body and *bios* with creativity also makes it simpler to conceptualize the way in which *zoē* is the foundation of sovereignty. Returning to the example of the two dissident journalists A and B, A was effectively placed in the enclosure of an *Umwelt*. It was not physical, like in the example of solitary confinement, but was no effective. The threat of extrajudicial execution has forced A to build immaterial walls around themselves that preclude any political creativity from being expressed by their body. This stifling of creativity is not limited to the prohibition to say or write something controversial. If A lived in the Third Reich, it would – for example – imply A's inability to refrain from a Roman salute when greeting someone, a vivid example of the taking-away of bodily creativity. It is in this way that the authoritarian government succeeded in positioning itself as the sovereign over A.

Concluding Remarks

On the Way to Real Fracture

The opacity of the terms *zoē* and *bios* has muddled our understanding of Agamben's conception of human, political life, positing an obscure fraction present in it. Upon the first attempt to separate the two terms, I have discovered the inadequacy of considering *bios* merely a social or political identity in addressing the possibility of isolating bare life, which Agamben claims to be the foundation of sovereignty.

In an attempt to determine whether *zoē* and *bios* are in principle separable, I turned to the discussion between Derrida and Agamben, as the former insisted on the futility of finding a principle that disjoints the two. What resulted is the re-evaluation of an assumption that was taken for granted up to a point in the present inquiry, namely that Agamben implied the *ontological* possibility of the separation of natural life and its form. However, he considered the fracture to be *fictitious*, while at the same time demonstrating its real, phenomenal consequences.

I then set out to establish the actualized phenomenon that inaugurates the fictitious *zoē* – *bios* separability. Considering Agamben's insistence on the inherently human character of the fracture-less life, I turned to Marchesini's work on conceiving of animal lives in search of that fracture actualized. If, after all, the lives of non-human animals are essentially bare, the phenomenal articulation of the difference between a form of life and the naked life would lie there.

The look into Marchesini's work proved to be fruitful. Instead of the extremely abstract understanding of what *zoē* and *bios* is, more solid definitions were found. *Zoē* – what is common to all life – was identified with having a body and this being-a-body. *Bios* – a peculiar way of an individual being – was identified with the creativity of living organisms.

This provided a crucial clue to conceiving of a phenomenal expression of the divide between natural life and its form – the taking away of creativity. This taking away can be enacted by ensuring the impossibility of communicability for a subject. Such an action reduces a person – or an animal – to a mere physiological body, predetermined and unfree.

The results of the present inquiry more than anything urge us to ask further questions. What exactly is creativity? Is it uncontroversial to say that it only exists in tandem with communicability? Are we to be satisfied with the conclusion that the ontological separation *zōē* and *bios* is indeed impossible? These questions are important avenues for further inquiries. With the present study, I hope to have demonstrated the possibility and the need to include the considerations of non-human life into our thought on the matter. Not only does such inclusion correspond to the pressing need of contemporary scholarship to surpass anthropocentrism, but also opens up previously under-explored paths of thought, letting thinkers expand their current understanding of life.

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Generating Two Modes of Life: a *Biopolitical* Reading of Asylum Seekers and Refugees

Giovanni Prins

Your home has become uninhabitable. Ever increasing political unrest threatens you and your family's safety, there is overwhelming poverty with seemingly no way out, or climate change has ravaged the land. There is only one possible way out: fleeing the country. It might be a familiar image by now: an inflatable boat filled to the brim with people who are desperately seeking refuge in Europe. Over the last decade, the amount of refugees worldwide has doubled – increasing from 10.4 million to 26.4 million (United Nations High Commissioner for Refugees 2021). Additionally, the number of asylum seekers has increased from some 800.000 to 4.1 million. Statistics show that 10% of these refugees were living in EU countries by the end of 2020, with 471.000 more people applying for asylum in EU territory (European Statistical Office 2021).

In order to properly analyze, problematize, and explain this phenomenon and the respective responses to it, I will draw from Michel Foucault's conceptualizations of *biopolitics*. In his work, Foucault traces two distinct but intertwined genealogies of biopolitics. One finds its roots in race struggles and state racism, whereas the other originates in the development of liberalism and political economy. Biopolitics can be seen accordingly as a mode of power that on the one hand seeks to produce docile bodies through *disciplinary power*, and on the other, regularize and control entire populations through *biopower*. In turn, the two genealogies of biopolitics create two different but not entirely separate modes of life: *bare life* and *precarious life*. Consequently, I will argue that the modern asylum seeker and refugee, exhibit in an exemplary fashion, traits of both modes of life. This will be done using the cases of Great Britain and Germany as examples, whose government policies on immigration and border control must be seen as a biopolitical governmentality that excludes those bare and precarious lives that are a threat to the cohesion of the homogenous State.

Biopolitics – a Modern Governmentality of Life

Nearly a hundred years ago, Rudolf Kjellén first made the theoretical connection between organicism and politics. The State, he argued, is not a static entity. Rather, its vitality and dynamic nature makes it seem more like a living organism. Life became a central term connected to politics and the term *biopolitics* was born (Lemke 2011, 9-10). By now, however, the term is mostly associated with Michel Foucault. In his conceptualization, biopolitics must be seen as a particular way of exercising power in modern society. It is this notion of biopolitics that I will concern myself with now.

Discipline and Biopower

Before biopolitics can be properly defined, it is crucial to specify Foucault's meaning of power. Power is often defined as the ability to repress, to silence. However, Foucault tells us, this analysis of power is insufficient. Power is not only repressive, but is just as much – if not more – a positive force that produces subjects through social relations, norms, values, and the appropriation of bodies (Foucault 2020a, 15-18, 29-30; Foucault 2020b, 23-25). Moreover, power has two important elements. First, power is always relational, and therefore not simply an object that can be transferred or exchanged. Related to this, power does not presuppose an individual subject over which it is exercised. Rather, power passes through individuals while simultaneously producing them. In this light, “power is exercised, circulates, and forms networks” and therefore constitutes our entire reality (Foucault 2020a, 30).

In modern society, power is exercised in two different manners. On the one hand, there is *biopower*, which denotes a shift from the *sovereign power* that was dominant up until the 19th century. Sovereign power is primarily characterized as that power which deduces, which impedes. In short, it is essentially the power to deprive or take away, and it culminates in the power to “take life or let live” (Foucault 2020a, 240-241; Lemke 2011, 34-35). Over time, a second form of power starts to take a central place in society. This form of power does not take life or let live, but rather it asserts a positive power over life. It is a power that deals with entire populations and regularizes and controls them: “It is, in a word, a matter of taking control of life and the biological processes of man-as-species and of ensuring that they are (...) regularised” (Foucault 2020a, 246-247). It “consists in making live and letting die”, and this is what Foucault calls biopower (Ibid.). This is the power to control and regulate entire populations using birth and death rates, rates of reproduction, and other facets of life. As such, it is about the promotion of ‘good’ lives, and the disavowal of other lives. On the other hand, however, there is *disciplinary power*, which is concerned with the production of docile, individual bodies. Individuals are both objects of analysis and manipulable machines that become increasingly efficient as they become more obedient and vice versa. Disciplinary power must “‘train’, rather than (...) select and (...) levy’, and as such ‘makes’ individuals” (Foucault 2020b, 136-138, 170). According to Foucault, contemporary society is characterized by a governmentality that predominantly applies these two modes of power, and the joint usage of these powers in all spheres of life is what he calls biopolitics.

Two Genealogies of Biopolitics, Two Modes of Life

Foucault traces the origin of biopolitics in two different domains: that of struggles between races, and that of liberal and capitalist government (Lemke 2011, 40, 45). In what follows, I will give an overview of the two, as well as argue that they lead to two distinct but intertwined modes of lives.

Race War, State Racism and Bare Life

In his 1976 lectures at the Collège de France, Foucault hypothesized that the shift from sovereign power to biopower is paralleled by another development. Namely, the shift from a “political-military discourse” to a “racist-biological discourse” (Lemke 2011, 40). Political-military discourse is characterized by what Foucault calls race war – i.e. a constant state of war between peoples (Foucault 2020a, 50-52). This war is not, as Foucault states, a Hobbesian war of all against all, but rather actual battles between different peoples. In a discourse of race war, the subject is never neutral or impartial. This subject is always on one side of a battle (Ibid.). It must be noted that race does not have any biological connotations in this use of the word. Instead, it denotes historico-cultural differences between peoples (Ibid., 77). Racial differences in this sense of the term exist whenever “two groups which do not, at least to begin with, have the same language or (...) religion” or whenever groups which “although they coexist, have not become mixed because of” differences and asymmetries in wealth or power (Ibid.). It is important to emphasize that race does not take on a normative, but rather a descriptive meaning according to this definition. According to Foucault, then, 17th and 18th century Europe was characterized by this discourse of binary antagonism (Lemke 2011, 40). Moreover, this discourse served to counter the legitimacy of sovereign power and its seeming universality, and was thus a counterdiscourse (Ibid.).

In the 19th century, however, this discourse underwent a modification. A division started to appear within its conception of race. On the one hand, race got a biological connotation, in which race war was not simply a war for political power, but rather implied a struggle for survival and existence in an evolutionary sense. On the other hand, the old race war increasingly started to be displaced by the dialectic of class struggle. We have, then, a reconfiguration of the political-military discourse into two: conflicts between biological races and class struggle (Ibid., 41). With this shift, a new discourse started to become dominant, namely a biological-social one. Crucial here is that instead of a world characterized by binary oppositions

and a large plurality of races, the State as a homogenous entity with a single biological race became the focus of attention. In this discourse, race was no longer seen as a group coming from elsewhere – geographically or socially - but rather became a single biological-social entity which was divided in a ‘superrace’ and ‘subrace’ (Foucault 2020a, 61). This latter definition of race became the focal point of this new discourse. Since the State was not threatened by an outside ‘race’ anymore, its biggest threat started to reside within. The preservation and unending project of purifying this homogenous entity started to become the most important task. At the root of this is the emergence of biopolitics as a mode of power (Ibid., 243; Lemke 2011, 41-42). By creating a discourse in which the State’s homogeneity is in constant danger from within, the State also generates and legitimizes the use of a certain means in order to prevent this. Thus, biopolitics originates in the moment that the discourse of racial purity replaces that of race war (Lemke 2011, 43).

In this genealogy, race has two important functions for biopolitical governmentality. Firstly, race makes the project of a pure and homogenous State possible. Indeed, it allows for a hierarchisation of different races in terms of moral value, intellectual efficacy, and, ultimately, worth. Racism as such is thus both a cause of, and a legitimation for, biopolitics (Lemke 2011, 41-42). Secondly, race gives rise to a particular positive correlation that exacerbates this. Fostering one life becomes possible only if another life is discarded. In order to protect the purity of the State, all those that threaten it must be eliminated. Thus, the development of race and biological racism creates a direct connection between one person’s wellbeing and another’s removal. The origins of biopolitics as such have major implications for the mode of life of the ‘unworthy’ race. In this framework, the biopolitical subject becomes an Other, a subaltern, and their life loses any substantial value. This subject takes on a modality of life completely devoid of its form, and becomes a mere means to an end. The Other is only important in serving as a constitutive outside, that is to say, as an agent that, through its exclusion, constitutes what it means to be included. In other words, the Other serves only – and is in fact a necessary condition - to define the One. Of course, the distinction that is made between inside and outside is not descriptive in nature. Rather, it is about producing and reproducing a normative ideal. The life of this Other, then, becomes nothing more than *bare life* (Agamben, 1998, pp. 6-9, 83). What is important here, is that the creation of this bare life is precisely the objective of biopolitics. In this framework, the life of this subject is included in society “solely in the form of its exclusion” (Agamben 1998, 8). Life becomes stripped of all its content, and what remains is a life characterized by its nakedness.

Liberal Politics, Capitalism and Precariousness

In a second body of lectures at the Collège between 1978 and 1979, Foucault takes a different approach to trace the naissance of biopolitics. In order to account for the shortcomings in his earlier analysis which he deemed reductionistic and one-dimensional for its limited focus on race, biopolitics is placed in a much more intricate framework in these lectures (Lemke 2011, 44). In this analysis, the notion of government(al)ity plays a crucial role. Steering us away from the modern, purely political connotation it has, Foucault argues that government used to have a much broader meaning up until the 18th century. It referred to, for instance, religious or medical practices, and encompassed topics such as household management, self-control, and religious guidance (Ibid.). Governmentality, then, is not simply about ruling in the political meaning of the word, but rather about the (self-)governing of subjects in a much broader sense. Foucault sees a crucial moment for the development of biopolitics in the liberal turn of this governmentality. Liberal ideology denotes a profound shift in the idea of government(al)ity. Whereas medieval society was characterized by a political discourse willed and put in place by God or nature, the liberal turn shows for the first time the artificial nature of government. Thinkers such as Thomas Hobbes and John Locke show that there is no such thing as a divine natural order that imposes the rules. Rather, nature can be formed and manipulated by man himself. As such, government(al)ity “shifts from external congruence to internal regulation” (Ibid., 46).

While a loss of state power seems a logical consequence of this development, the opposite is true. Instead, Foucault tells us, state power undergoes a methodological change. Imposing or enforcing power slowly gets replaced by stimulation and *laissez-faire* methods. In other words, power takes on more of its positive nature as opposed to its negative one. Power becomes productive and creative, instead of restrictive and limitational (Lemke 2011, 47). In order to secure a free and self-regulatory population, biopolitical technologies of security start to play an important role. Foucault here denotes three types, of which two are familiar: legal regulations, disciplinary mechanisms, and technologies of security - or, biopower. As stated above, disciplinary mechanisms hierarchize and distinguish between the normal and abnormal. As such, discipline is about normalization. A norm is established, which is consequently meant “to function as a minimal threshold, as an average to be respected or as an optimum towards which one must move” (Foucault 2020b, 182-183). Legal apparatuses operate by categorizing these norms in the form of laws. As has been established, biopower operates somewhat differently. The objective of biopower is not to take an individual and make them conform to a norm. Rather, biopower analyzes reality *an sich*, finds an optimal middle point which is taken as the norm, and regulates the population accordingly. Ultimately, a combination of these techniques and procedures are used to correct individuals, and thus adjust them, or entire populations, to the established standard. What makes biopolitics peculiar to liberal government, then, is that liberal ideology gave rise to a dichotomy between the human as a legal subject, and as a free and self-regulated living being. Therefore, the question becomes how to rule a human being characterized by this dualism. Foucault illustrates this when he emphasizes that the emergence of biopolitics cannot be separated from the emergence of biology as a science. The development of biology led to the newfound notion of the human body as an entity that internally regulates itself. This is palpably connected to the idea of the liberal subject as self-constituting and self-regulatory. The biological notion of self-preservation and liberal idea of self-regulation, then, find each other in the idea that no external foundation, but rather an internal machinery is at work in the organism/subject. Subsequently, the human being – being both a physical being and a moral-political subject - becomes characterized as an entity that is entirely self-regulated, and thus must be ruled as such. Hence, biopolitics becomes a strategy to achieve this.

This framework also has certain implications for the biopolitical subject. Certainly, the liberal biopolitical framework generates a second mode of life. Here, the subject is, first and foremost, a free entity, an individual that is able to – and indeed, obliged to – preserve and regulate themselves. However, what happens when somebody is not able to succeed in this endeavor? While deviating from the norm in this framework still entails that an individual becomes abnormal or subaltern, I propose that something else entirely characterizes the life of such a biopolitical subject. In its freedom, the life of the subject becomes – borrowing the notion from Judith Butler - precarious. When one’s life is entirely one’s own responsibility, life becomes uncertain, perilous, and ultimately thus, precarious. A nuance made by Butler is important here. One could say that, in contemporary society, the way we live our lives is always entirely our own responsibility. The question then becomes whether we are not all characterized by a certain precarity. Indeed, that is the case. However, the crucial point here is that while precariousness is a mode of life shared by all, it is distributed unequally (Butler 2004, 32). What I mean to signify with ‘precarious lives’, then, are those that are most vulnerable, the ones, as Butler puts it, with the highest degree of “injurability” (Butler 2009, 182).

A final remark must be made. In distinguishing between bare life and precarious life, I am not stating that they are entirely separate. Certainly, lives stripped of their value and content – bare lives – are fundamentally precarious. Conversely, precarious lives also lose some of their value – this is a necessary characteristic for life to become precarious. My point in making a sharp distinction between these two modes of life is to distinguish between lives characterized *primarily* by their devaluation or by their socioeconomic uncertainty. The core characteristic of bare life proposed here is that it is completely devoid of value and

therefore becomes almost like an object. By precarious lives, I mean lives defined predominantly by socioeconomic freedom, ultimately leading to extreme capriciousness. These lives overlap, it is true, but the distinction is worth making since both lives point at entirely different characteristics of the biopolitical subject and thus the biopolitical governmentality it implies. In what follows, I will contextualize these modes of life by applying them to the modern asylum seeker and refugee. This figure exhibits, I argue, in an exemplary fashion, traits of both modes of life.

Biopolitical Lives in Germany and the U.K.

The problem of finding refuge is extremely complex. Even the definition of refugee is already a contested term; in order to formally become a refugee, an asylum seeker must firstly apply for asylum. In turn, this application must be authorized prior to acquiring refugee status. In 2020, out of the 471.000 asylum seekers in Europe, only 106.200 were granted this status. Not being granted this status has certain legal implications. For instance, a refugee has a right to work and social benefits, whereas an asylum seeker is not allowed to work and will receive less social benefits, depending on the country.

An interesting comparison can be made between two countries: Germany and Great Britain. Great Britain has been relatively unwilling to provide asylum, whereas Germany has exhibited a *Willkommenskultur* (Mavelli 2017, 825). While seemingly juxtaposed, however, both must be seen as biopolitical governmentalities that create, utilize, and perfectly showcase bare and precarious lives.

British Reluctance - a Biopolitical Threat

The British response to the European refugee crisis of the last decade can only be defined as peculiar. Britain has pledged to provide refuge and care for a small number of weak and sick asylum seekers, while intensifying the borders for “able-bodied” and “bogus” asylum seekers (Mavelli 2017, 811). In 2020 there were 29,456 applications for asylum. The majority is still pending, but the decisions that have been made so far show a refusal rate of around 70%. If we look at 2016, a year in which a majority of the applications have been assessed, 15,850 out of 30,747 people were refused asylum, thereby indicating a refusal rate of 53% (Sturge 2021, 12-13). These policies must be seen as a biopolitical governmentality that creates unworthy and vulnerable lives in order to maximize the wellbeing of the population. This becomes palpable by three elements of the British approach to asylum seekers: (1) making the asylum seeker an inferior through the discourse of islamophobia, (2) fostering the British population through the creation of objects of compassion, and (3) exploiting refugees in the labor market.

A common theme in Western discourse is islamophobia (Ogan, Willnat, Pennington, and Bashir 2014, 28-29). Muslims are often displayed as prone to violence and illiberal, therefore posing a threat to the cohesion of the more developed West. Britain has not remained exempt from this thread. In the last decades, islamophobia has become a prominent aspect of British society as well (Abbas 2020, 498-499). This has certain implications for the British view on asylum seekers. The majority of people seeking asylum has a Muslim background. As such, they have frequently been - and are - displayed as violent, underdeveloped, and even as a threat to personal and national security (Mavelli 2017, 818). Through this discourse, the asylum seeker is displayed as an ‘inferior race’ that threatens the homogeneity of the State. This is exacerbated by statements from politicians such as David Cameron who referred to asylum seekers as “a swarm of people” (Ibid., 819). Ultimately, this strong anti-immigration sentiment played a major role in the Brexit referendum of 2016, which is exemplary for this discourse (Abbas 2020, 501). Through this discourse, then, the asylum seeker becomes degraded, and their life consequently becomes devoid of any value. The life of the asylum seeker is characterized by its lack of form, by its nakedness, and thus becomes bare life. This figure, thus, becomes a biopolitical object which needs to be kept out in order to safeguard the population. This is

showcased by the peculiar decision of the British government to cease search-and-rescue missions in the Mediterranean, demonstrating once again the nakedness of the asylum seeker's life. In an attempt to reduce immigration, lives without meaning are disavowed.

The creation of these bare lives, however, is multifaceted. In order to produce unworthy lives, value must necessarily be given to other lives as well. Of course, the lives that will primarily be fostered are the British lives. However, a distinction is made within the figure of the asylum seeker as well. On the one hand, they are portrayed as irresponsible 'bogus' asylum seekers who want to increase their wellbeing by leeching on Britain, ultimately endangering the wellbeing of the 'true Brits'. On the other hand, a 'good' refugee is created that is deserving of assistance (Maveli 2017, 823-825). This classification of a good and bad asylum seeker accounts for those – albeit a small number – who are allowed refuge in Britain. Yet, these 'worthy' refugees – women, children, and the sick – remain biopolitical objects in a different sense

The paternalistic act of aiding those who are deserving and in need of help reinforces a certain image of the nation. It shows that the British population fulfills its moral duties by caring for the weak. By doing so, an image is produced of the British nation as caring, compassionate, and ultimately a parental figure. In turn, these representations of the nation foster the wellbeing of the population itself. In other words, a particular national identity is cultivated through these actions (Ibid., 826). Asylum seekers are treated as "objects of compassion" that are deemed of value only for the wellbeing of the population (Ibid.). Thus, even though a distinction is made between bogus asylum seekers and good refugees, the life of the 'worthy' refugees remains a life without form. A life characterized by its nakedness, included "solely in the form of its exclusion" (Agamben 1998, 8).

The life of the refugee in Britain takes on a second modality as well, namely that of precariousness. Even though many of the refugees taken in are weak and sick, they are not entirely exempt from having to work. They might still be able to work certain jobs, or be obliged to in order to survive. Through their status as refugees, however, they find themselves at the lower end of the labor market. Therefore, refugees are often found working low-wage and insecure or temporary jobs (Lewis, Dwyer, Hodkinson, and Waite 2014, 582-584). The refugee, then, while supposedly having the freedom of a British citizen, is still exposed to major exploitation in the workforce. Discrimination – caused by the ubiquitous islamophobia for example – makes acquiring a job difficult to start with. Consequently, refugees have to work the hardest and lowest paid jobs. From the employer's perspective this is desirable, since the refugee becomes the perfect flexible and low cost worker (Ibid.).

However, it does make the life of the refugee extremely precarious. It must be mentioned that not only asylum seekers and refugees are subject to precarity as a consequence of discrimination. For instance, Muslims born in Britain fall victim to this as well. However, the reality of the asylum seeker and refugee is even more precarious. Asylum seekers are generally not allowed to work until their application is granted, and are therefore completely exempt from any legal protection if they decide to work illegally. In order to make a living however, this may be necessary nonetheless. In turn, the level of exploitation and insecurity is exacerbated even more. Furthermore, it may take months or even years before an application is processed, which adds another layer to the precarity of their lives. Being subjected to a labor market that exploits you to the utmost degree, while simultaneously being in limbo on whether you are allowed to remain in the country creates a multi-layered precarity.

Moreover, refugees, while allowed to work legally, face a higher level of unemployment than any other group. For reasons mentioned above, but also because of obstacles such as the lack of British references or work experience, limited language skills, problems with documentation, or non-recognition of qualifications received in their home country, refugees face a hard task in acquiring a job. This forces refugees and asylum seekers alike to opt for flexible, low-paid, and oftentimes illegal jobs, where they become subject to extremely

exploitative labor conditions (Lewis, Dwyer, Hodkinson, and Waite 2015, 9). In short, a highly exploitative labor market combined with strict immigration policies makes the life of the asylum seeker and refugee highly precarious. Borrowing from Lewis et. al, this figure exhibits a hyper-precarious life (Lewis et al. 2014, 592-594).

German Wilkommenskultur – a Biopolitical Asset

Contrary to Britain, Germany has exhibited rather welcoming behavior with regard to asylum seekers. In 2020, Germany granted 62,470 out of 128,650 people asylum, while in 2016 this number was 433,905 out of 745,200 – the largest number of total applications. Therefore the refusal rate in 2020 was approximately 51%, and 42% in 2016 (Sturge 2021, 28; European Statistical Office, 2021). Admittedly, this does not seem to differ from the British policy that much. However, looking at the amount of applications granted relative to the population, the so-called German *Wilkommenskultur* becomes much more apparent. Relative to the population, Germany granted asylum to six applicants per 10,000 people, whereas in Britain this was only one (Ibid., 29). Moreover, Germany has repeatedly and publicly vowed to welcome asylum seekers and refugees into the country. As such, Germany has presented itself as one of the greatest humanitarian pillars in Europe (Mavelli 2017, 827-828). All of this illustrates an entirely different approach when compared to the British. However, while practiced differently, this governmentality must also be seen as biopolitical in nature. Indeed, the German immigration policies primarily serve to strengthen the wellbeing of the population. I will elucidate this on the ground of two main processes: (1) reinforcing the German national identity through paternalism and (2) utilizing the migration-development nexus.

As stated above, Germany is the country that houses the largest number of refugees in Europe, and has been for some years now. This tradition has developed for a number of reasons. On the one hand, historical reasons such as the guilt for World War II, as well as the experience of Germans as refugees in its aftermath play a part in these. On the other hand, more contemporary factors such as the desire to battle ongoing xenophobia in Germany, protect the stability of the European bloc, or even Angela Merkel's personal experience as a Christian growing up in East-Germany, can be seen as motivations for the relative openness of the borders. Ultimately, these motivations amount to a desire to display compassion and humanity, which has led to a self-understanding of Germany as a welcoming, compassionate, and moral leader of Europe (Mavelli 2017, 827-828). What has been mentioned concerning Britain, then, is even more true for the German case: refugees become live objects that foster the emotional wellbeing of the nation. The refugee, then, is nothing but its value as an object that cultivates the health of the German population. The German immigration policies, then, are a biopolitical governmentality with “as its target not only – and possibly not *primarily* – Syrian refugees, but the German population, its identity and self-understanding through the care of its emotional well-being [emphasis mine]” (Ibid., 828). Moreover, as Zeveleva (2016) convincingly argues; national identities are politically constructed, informed, and maintained by the notions of inclusion and exclusion (42). Inclusion here is defined as being a member of the political community – e.g. in terms of citizenship or legal right – and exclusion as those deemed to be nonmembers. However, these nonmembers are included precisely through their status as excluded. They function as an Other, which in turn defines the One. Phrased differently, it is a constitutive outside that constructs the identity of those on the inside (Ibid.). For instance, by including them as ‘objects of compassion’, Germany may see itself as caring and humanitarian in nature. Borrowing from Zevela, then, the German national identity is constructed by the (bio)political process of including the excluded (Ibid., 42, 45). In a sense, the bare life of the refugee allows for the (re)production of the German national identity, in turn cultivating the wellbeing of the population. The refugee for Germany is thus a biopolitical asset, as opposed to Britain where asylum seekers and refugees are first and foremost threats.

What remains to be explored is how the refugee in Germany takes on a second mode of life: precarious life. For this it is best to turn towards a quote by Angela Merkel: “countries have always benefited from successful immigration, both economically and socially” (Mavelli 2017, 828). Just as in the British case, Germany sees refugees as able-bodied workers that can supplement the workforce. Contrary to Britain, however, Germany does not make the distinction between bogus asylum seekers and able-bodied workers. Moreover, whereas Britain focuses on the weak and sick asylum seekers, Germany sees all refugees as possible assets. As illustrated by Merkel’s quote, this has been made rather explicit. This can be explained by Germany’s declining workforce. The increasing average age of the population causes the working, tax-paying population to shrink in relative size. In order to sustain social benefits for retired, poor, or sick people, Germany needs skilled workers (Ibid., 829). This is why housing a large number of refugees has economic benefits as well. These people become agents in the job market that helps sustain the country through tax-revenue. Thus, in the economic dimension as well, migration becomes a method through which the health of the German population is nurtured. This process can best be described as – and I borrow from Pinkerton (2018) here - the migration-development nexus (449-450). Here, the refugee is once again appropriated and utilized as an object. This fact notwithstanding, the problem is the same as mentioned above: refugees find themselves at the lower end of the labor market, consequently making life insecure and precarious. Refugees may be welcome in Germany because of their position as potential laborers, however in practice this is not as beneficial to them as may seem.

While it is true that Germany discriminates to a much lesser degree with regards to refugees in the labor market than Britain does, considerable discrepancies remain between job opportunities of natives and refugees. This is mainly caused by the lack of proficiency in the German language. Indeed, finding a job is almost impossible without possessing the proper language skills. Even though many refugees might be well-educated, this obstacle is so large that education is of zero importance (Kogan 2010, 95-96, 114). Furthermore, their background and social context differ greatly from native Germans, possibly creating even more difficulties (Battisti, Giesing, and Laurentsyeva 2019, 1). Consequently, they are forced to work flexible, low-paid jobs. It must be noted that assistance in finding a suitable job is much better organized in Germany than in Britain. There are job-searching agencies that help refugees with acquiring a job and flexible workers are better protected under German law (Pulignano, Meardi, and Doerflinger 2015, 813-814). Nonetheless, the fact remains that refugees represent the largest portion of unemployed people in Germany, and those who have obtained a job do not have the benefit of long-term security (Battisti et al. 2019, 1; Pulignano et al. 2015, 814, 817-818, 821). Employees simply prefer cheap, flexible workers, who they can find in the refugee. As such, life is, and remains, precarious for the refugees in Germany.

Conclusion

In this essay I have argued that, through Michel Foucault’s dual theorisation of biopolitics, life takes on two distinct yet not entirely separate modalities. On the one hand, biopolitics is traced through the history of race struggle, to the development of State Racism, and eventually leads to the production of bare lives. On the other hand, the rise of liberal governmentality, characterized by the idea of self-regulation, led to a different biopolitical mode of life – precarious life. I have argued that, while bare lives are always precarious and vice versa, distinguishing between the two is useful because they indicate two inherently different aspects of life – a complete and total devaluation of life, or the creation of the utmost socioeconomic uncertainty and vulnerability. By exploring two entirely different realities – the British and German one – I have illustrated that the figure of the modern asylum seeker or refugee exhibits, in an exemplary fashion, traits of both modes of life.

Some final remarks must be made. In this framework, the housing of refugees – or the lack thereof – becomes an expression of technologies of security, aimed at the wellbeing of the State itself, as opposed to

humanitarian motives. With this, however, I am not trying to say that humanitarian governing does not factor into immigration policies at all. Certainly, the issue at stake here is of a complex nature. Yet, it is important – and therefore it has been my aim – to emphasize that biopolitical governmentality plays a crucial role. In this framework, then, the implications biopolitical government has on the lived reality of the asylum seeker or refugee are highlighted as well. It showcases how their life is stripped of all its content, as well as the high degree of vulnerability and injurability this figure exhibits. Moreover, by making a distinction between the British and German case, I am not saying similarities are not to be found. Indeed as I have argued, both countries use similar strategies when dealing with asylum seekers or refugees. The point I am making through this sharp distinction, however, is that the focus is inherently different. The focus of the British case lies primarily in portraying the asylum seeker as a threat to the State, whereas the German case takes an opposite approach. As such, the British seek to ‘protect’ their population from an enemy, whereas the German’s utilize the refugee as an asset.

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Hiding Mutating Spreading

Mark van Loon

Within the context of both the ongoing pandemic and the Anthropocene, the contemporary world has seen two entities come to the fore which present particularly significant life questions: viruses and technology. In everyday speech, viruses appear to be entirely biological. However, as Latour has shown in *The Pasteurization of France* (Latour 1988), even the history of microbes, which precedes the birth of virology, has shown the constitutive role of human-technological influence on conceiving them. Although, of course, viruses already existed before, they cannot be thought of outside of technological constellations. Moreover, until today, the ontological status of viruses as a life form is controversial, as it calls into question the notion of the living being as a self-sustaining being.

The latter point is of particular interest for the topic of this essay, in that the symbiotic requirement that the virus has with regard to the cell may be said to open up a perspective on how to interpret humanity's technical dimension. The question is not whether technology is or is not 'alive', but that life, and in particular human life, is inherently technological. Both humanity and technology exist and evolve through their symbiosis. The task becomes one of investigating how this human-technological symbiosis has taken form throughout history in order to provide an understanding of life's technical dimension and its ramifications in the age of the Anthropocene.

The first segment will provide a reading of the work of Bernard Stiegler, so as to give an account of the manner in which technology is integral, rather than supplemental, to human life, as well as offer a perspective on how this fundamental relation has evolved into its current state through a renewed understanding of the status of digital communication within the evolution of societies. This will be done by understanding life as the interplay between different milieus throughout history, providing a means of understanding the occurrence of digital cyberspace as an extension of this evolutionary interplay, resulting in a diagnosis of the contemporary Anthropocene based on the preceding analysis.

The second segment will synthesize the ideas of Stiegler with Michel Serres' notion of the parasite and his general theory of communication. This will be done in order to show that the logic of the parasite as an intruder can be integrated into Stiegler's account of technical evolution, to show how such a logic can contribute to a more detailed perspective on how social, technological, and environmental relations can be understood, as well as allow for an interpretation of the occurrence of the computer virus within digital cyberspace.

Stiegler's notion of technics

Between determinist theories on technology and those that place cultural norms at the heart of technological innovation, the topic of technology, its general place, and its value within life, have become increasingly important as well as contested debates within academia and politics. Bernard Stiegler's understanding of technology and his theory on its relationship to life may provide a worthwhile entry to approaching such questions.

In his early work, *Technics and Time 1* (1998), Stiegler seeks to gain an understanding of the emergence of 'the human' as well as that of technology by regarding the two as co-constitutive. In order to develop his thesis on technology, he looks towards, among others, the work of paleontologist André Leroi-Gourhan as well as that of Gilbert Simondon, with the former's consideration of human evolution as a process of

technological evolution, as well as the latter's notions of individuation and transduction, serving as key points of departure (Stiegler 1998, 27).

Individuation as a process of transduction

As a concept, individuation concerns itself with the question of how an entity that can be considered an 'individual' emerges, or the process by which such entities are invented. Concerning the individuation of human beings and technological artifacts, this question translates into that of the 'who' and the 'what' in technical and human evolution: "'Who' or 'what' does the inventing? 'Who' or 'what' is invented" (Stiegler, 1998, 134)? For Stiegler, the two remain in an undecidable relation. They are necessarily tied together and cannot be regarded as two self-sufficient entities, and must therefore be seen as constituting a transductive relationship: a process of informational exchange whereby the one cannot exist without the other (Stiegler 2009, 2). This idea is derived from the work of Simondon:

In a veritably complementary relation, man must be an incomplete being made whole thanks to the machine, whereas the machine in turn must find in man its unity, finality, and connection with the ensemble of the technical world; man and machine are mutually mediating because the machine possesses in its characteristics spatial integration and the capacity to preserve information through time, whereas man, through his faculties of knowledge and his power to act, knows how to integrate the machine into a universe of symbols that is not spatiotemporal and into which the machine could never be integrated by itself (Simondon 2020, 425).

In other words, as human beings and technical objects themselves are 'incomplete' beings when considered as such - not fully individuated - they exchange information through processes of feedback in order to go from abstract potentialities to concrete actualities. That is to say, the exchange of information between two entities, here human beings and machines, does not result in two stable or fixed states, but instead in transformative states which complement and form each other, thereby also making new individuations possible.

The concept of transduction, as such a process of communication, is more commonly used in the field of virology and microbiology, describing a process wherein the exchange of genetic information between bacteria takes place through the intermediary of viruses, the virus thereby being able to mutate within bacteria (Dimmock & Primrose 1994, 192). Already here, the comparison to the virus may serve as a worthwhile illustration for understanding the process of individuation regarding that of humanity in relation to technology. Outside the cell, the virus is an 'incomplete being', it is not commonly referred to as a living being and does not reproduce or mutate. However, once in the cell, the virus is able to mutate or individuate. The cell, in turn, by incorporating the virus, is individuated anew - it is itself transformed through its incorporation of the virus' DNA or RNA.

What, then, is the relationship between life and technology within this constellation? Concerning this question, Stiegler's thesis is that technology, "as a process of exteriorization, is the pursuit of life by other means than life" (Stiegler 1998, 17). That is to say, technical evolution can be seen as following an inverse relationship to that of the 'life' of the cell and the 'non-life' of the virus. The passage is not from the 'non-living' virus to the 'living' cell as in microbiological transduction, but from life, the human being, to non-life, the matter out of which technology is made, in that the technical artifact serves as an exteriorization of memory and skill which is inscribed into inert matter, bringing a process of biological and technical co-evolution into existence.

Technical patterns within zoological patterns

In order to demonstrate this intersection between the biological and the technical, Stiegler draws upon paleontology, thereby addressing the question of whether, throughout the history of technical evolution, one is justified in speaking of a universal techno-evolutionary tendency that can be studied, in a similar sense as one would speak of tendencies in biological evolution. Regarding this question, Stiegler, following Leroi-Gourhan, emphasizes the interplay between an abstract universal ‘technical tendency’, concretized in differentiated ‘technical facts’ which are culturally specific (Stiegler 1998, 48). Although the manner in which technics have manifested themselves throughout history has been diverse depending on the specific cultural and physical environment, there is nonetheless a process of evolution following a universal “quasi-zoological lineage” (Stiegler 1998, 49), as the technical transformation of the environment brings into being an alternative evolutionary process known as ‘artificial selection’ (Moore 2017). The ‘technical tendency’ can be described as the tendency of a technical object towards an organization of increased complexity throughout history: “Just as there is no regression of the living, but an increase in negentropy through the ineluctable complexification of genetic combinations, so also there is only technical progress. There is a teleologism in technics linked to the principle of tendency” (Stiegler 1998, 54).

Just as early cells have evolved into complex living beings, so too have technical objects evolved under the influence of exposure to ‘external pressures’: “The techno-logical combinatory is finite, and the problems to which it responds, as well as the solutions resulting from possible combinations, forming the horizon of the tendency (...) are limited in number” (Stiegler 1998, 58). Here we may think of the passage from a hut to a house, from a house to an apartment complex, and so forth. One may notice how, throughout these passages, technical objects generally form more complex and unified forms of prior technical objects. In turn, this process affects the human biological species and its ways of life which are adapted to its new technical surroundings. To argue that ‘technology is inherent to life’ amounts to saying that technical evolution, although itself not biological, necessarily unfolds as a quasi-zoological trajectory based on forms of mutual co-adaptation of life to technics and technics to life, an intersection in which “none of the terms of the relation hold the secret to the other” (Stiegler 1998, 49).

In order to develop this idea more concretely, it will now be shown how this intersection manifests itself on different scales and within different milieus. This will be done by distinguishing three kinds of individuation resulting from life’s technical dimension: (1) psychic individuation, (2) collective individuation, and (3) technical individuation. By outlining these three processes, it can be shown how the genesis of technology amounts to the genesis of the psychic and the collective, as well as how these processes have unfolded in a unique individuation of the technological system as such, the outlining of this arrangement amounting to what Stiegler terms ‘general organology’ (Stiegler 2020).

Epiphylogenetic traces

Concerning psychic-individuation, what is important to note is Stiegler’s continuation of the work of Jacques Derrida, specifically his notion of *différance* as “an articulation in the history of life” (Derrida 1976, 84). *Différance* implies a difference and deferral of what metaphysics has deemed to be being, taken as presence, through its temporalization and spatialization. A moment is captured in time and space, and remains even when the creator is absent. The idea is thereby that what is articulated, expressed, or experienced by a living being is never fully self-sufficient or present to itself, but always leaves a trace, a residue of what remains absent, the ‘unthought’ giving rise to a new dimension, or mutation, of life. For Stiegler, the question of technics is the question of *différance* as the history of life, the conservation of the past which was not lived but nonetheless leaves a trace, the precondition of *Dasein*’s temporal experience of being-in-the-world:

What Heidegger calls the already there, constitutive of the temporality of Dasein, is this past I have not lived but is nevertheless my past, without which I would never have had any past of my own. (...) [T]he epigenetic sedimentation, a memorization of what has come to pass, is what is called the past, what we shall name the epiphylogenesis of man, meaning the conservation, accumulation, and sedimentation of successive epigenesis, mutually articulated. (Stiegler 1998, 140)

That is to say, technics serves as a fundamental condition of the experience of temporality, in that it, far from being a merely functional apparatus in its present, serves as the necessary trace of past cultures and past forms of knowledge, allowing such forms of knowledge to be passed on through generations and thereby establishing the individual and collective memory of future cultures, this concretized and exteriorized memory being named ‘epiphylogenetic’ memory. Without the technical artifacts into which forms of knowledge are inscribed, such forms of knowledge would be largely lost with the death of the individual.

In other words, technics, as a form of inscription of memory into inorganic matter, serves as a third form of memory: “genetic memory; memory of the central nervous system (epigenetic)¹¹; and techno-logical memory (language and technics are here amalgamated in the process of exteriorization)” (Stiegler 1998, 177). Stiegler’s argument is therefore that *anthropogenesis*, the emergence of what we now know as the ‘human being’ as well as the establishment of the noetic capabilities of retaining the past and projecting or anticipating the future, are fundamentally established through a process of *epiphylogenesis*: “It is in this sense that the what invents the who just as much as it is invented by it” (Stiegler 1998, 117). The individuation of the psychic ‘who’ is just as much driven by the ‘what’ of technics as the inverse. What will now be shown is how this process of interiorization and exteriorization of memory ties into the constitution of social relations throughout time, as well as into the formation of today’s technical infrastructure.

Reterritorializations of the terrestrial world

The dynamic of exteriorization and interiorization of memory is at once psychic as it is socio-cultural, in that every form of psychic interiorization draws upon a collective cultural past, and every externalization of memory, when materialized in artifacts, builds upon this past and anticipates and creates the future environment. This idea ties into Leroi-Gourhan’s distinction between the *interior* and *exterior milieu*, in which the social group functions as a living organism: “the interior milieu is social memory, the shared past, that which is called ‘culture’ (...) the exterior milieu is the natural, inert milieu, but also one carrying ‘the objects of different human groups’” (Stiegler 1998, 57). At the collective level, the same transductive dynamic thereby holds, in which “the encounter between the two milieus is the coupling of the human qua social being to matter qua geographic system, comparable to the structural coupling of the living and its ecosystem” (Stiegler 1998, 57). It therefore holds that societies, in creating a technical living sphere, are able to individuate as a collective.

However, throughout the gradual processes of exteriorization and interiorization, the technological artifacts increasingly gain a certain degree of abstraction with regard to the knowledge invested, as each form of knowledge, or each exteriorization of knowledge as a technical organization of matter, builds upon a prior form of individual and collective memory, and thus the ‘informative dimension’ of the technical object becomes more abstract: the form of a book instructs less concerning its use than, for example, the prehistoric

¹¹ Stiegler’s understanding of epigenetics expressed here differs from its contemporary understanding. Stiegler maintains that the first two forms of memory do not communicate at all, whereas it has now been established that genetic programming and experience do in fact communicate. Stiegler’s analysis is however more concerned with the effect of technology on speciation and life once it is fundamentally connected with technology for its survival, which does not contradict the contemporary understanding of epigenetics (Pavianni 2022, 10).

knapped-flint used for cutting and hunting, whose operation requires less learning processes for its functional adoption (Stiegler 1998, 152).

Throughout time, as technology becomes increasingly abstract and builds upon prior forms of technology, what occurs is a tendency towards an autonomous individuation of the technological system as such, becoming manifest in the advent of industrial society, in which technology and science merge and thereby intensifying the formation of an abstract, rationalized system (Stiegler 1998, 21). Stiegler notes that, for Simondon, what reveals itself concerning the emergence of the industrial technological system is the overdetermination of the technical tendency: “the inventiveness proper to the technical object is a process of concretization by functional overdetermination. (...) The machine does not replace the human: the latter supplements, up to the Industrial Revolution, the absence of machines” (Stiegler 1998, 68). The concretization of the industrial, machinic, and cybernetic systems of today’s world cannot be understood by considering technology as merely individual tools, but necessarily as a dynamic in which the system tends to integrate or ‘code’ everything outside of it into the system itself. From this dynamic process, there arises a new milieu next to the aforementioned interior and exterior milieus, a technical milieu, a materialization and intensification of the technical tendency as such: “this tendency must do away with all anthropological provenance. Such a teleology is not a human process” (Stiegler 1998, 72).

Considering all psychic, collective and technical questions as organological questions, that is, as matters of their mutual establishment and co-evolution throughout time, one may question what it means to orient oneself in the contemporary world, one which remains globally connected in an age of information. In what sense does the technical tendency manifest itself, for example, when it comes to technical interventions such as those of big data and artificial intelligence within consumerist societies?

Real-time Epiphylogenesis

As we have seen, psychic and collective individuation has taken form throughout history through the internalization and externalization of memory into technical artifacts. Today’s digital age has revolutionized this process in the form of big data, whereby the process of the interiorization and exteriorization of memory no longer needs to pass through human cognition but is instead directly automated:

All support media so invested answer to the requirements of the new organizational forms of the already-there qua tertiary memory (...) This manipulated, synthetic, biological medium is itself nothing other than artificially accelerated evolution, in which the very nature of evolution is changed.
(Stiegler 2009, 99)

In other words, contemporary big-data industries are, in essence, an accelerated industrialization of epiphylogenetic memory, of what was earlier described as the trace, in which the traces of human activity and preferences are integrated into computing mechanisms and thereby used to stimulate consumption, driven towards short-term profits through the intensification of the consumerist system. Whenever one engages in online activities, just as our Neanderthal predecessors did when cutting flint, one leaves traces of information and data. These traces, through which psychic and collective individuation has traditionally occurred, remain subservient to the imperative of capitalization as the materialization of the technical tendency, leading not towards psychic individuation, but towards ‘dividuation’ (Stiegler 2015, 62), in that all forms of life become integrated into the expansion of the technical system, manifesting itself in increasingly homogeneous commercial cultures.

That is to say, the intensification of speed brought about in an economy of permanent innovation has as its effect “a divorce between the rhythms of cultural evolution and of technical evolution” (Stiegler 1998, 15), meaning that the technological system as such divorces itself from cultural habits and cultural practices,

destabilizing social life and thereby preventing technology's "metastabilization with the other systems that constitute the social body, destroying in advance any potential [societies] might have in adopting the technical system, or of controlling its effects" (Stiegler 2018, 105). Stiegler's analysis thereby provides a rearticulation of the question concerning technology as well as the status of life, the trace being the history of life, within today's algorithmic-technological organization: "It is no longer just a question of having to abandon the modifier 'sapiens' after 'Homo'; now the title 'Homo' itself is in question—and even anterior to that, *zōon* itself" (Stiegler 2009, 99).

Within today's context of the Anthropocene, such a tendency becomes especially problematic. What becomes manifest in contemporary societies is a state of permanent disorientation and generalized entropy. This entropic techno-social dynamic which characterizes the Anthropocene is, for Stiegler, one of permanent innovation, acceleration, and disinhibition (Stiegler 2018, 105). Urgency and crises are no longer the exception but the law, resulting in a constant adaptation to contingencies solely by displacing them, without being able to solve, let alone call into question, their fundamental causes. This tendency thereby systematically implements a double-bind: "to perpetually go faster in order to reduce risks – through this acceleration, to displace risks by taking them to their limits" (Stiegler 2009, 140). When a system is geared towards maximum efficiency, when technical modes of production serve no other cause than short-term profit maximization, and when the public sphere is destroyed under the imperative of global commercium, all forms of hope for a sustainable and livable future dissolve into a fatalistic "becoming without future" (Stiegler 2018, 56). At the heart of the Anthropocene lies a structural irrationality resulting in a disintegration of social life under such unbearable and unsustainable conditions.

Such an analysis designates the Anthropocene as an inherently epistemological problem to be addressed. It requires a renewed understanding of dynamics within systems and an account of how shifts may occur within them. The next segment, therefore, consists of a twofold task. It will first show how Michel Serres' notion of the parasite can be synthesized with Stiegler's theory of technical evolution and, secondly, demonstrate how his conception of parasitism can be used in considering technology from a relational perspective using the computer virus as an example.

Michel Serres' theory of communication

In Michel Serres' work *The Parasite* (2007), the concept of the parasite is mobilized to fundamentally rethink how relations within systems are constituted. We may be accustomed to associating parasites with biological entities such as rats or viruses, or 'social' parasites, but, for Serres, it is much more than that - it is a fundamental relation which constitutes, guides, and changes systems. That is to say, Serres extends the mechanism of parasites, that which intrudes, disrupts, or distorts a biological or social system, to a concept of what is known as *noise* in communication theory (Shannon 1948), that which is suppressed for clear communication, the 'background noise' that serves as a distortion within communication. For Serres, communication does not begin from a direct or clear relationship between messenger or receiver, but consists of the suppression of noise (Simmons 2017, 4), the 'blocking out' of the environment in order to hear a message. The key message behind Serres' notion of the parasite is that, although one may not be inclined to regard a parasite as part of the system, just as one would not be inclined to regard noise as an integral part of communication, what may appear to be a distortion is in fact that which forms the system itself. Integrating this idea into Stiegler's account of technical evolution may allow for an implicit logic in technical relations to be located, which may, in turn, allow for an enriched understanding of the manner in which technical objects exist and complexify over time.

The return of the repressed medium

An important starting point in this undertaking is the notion of repression and the ambiguity it gives rise to in distinguishing interiority from exteriority. Even if we accustom ourselves to viewing parasites and background noise as exterior or supplemental to the system they parasitize, as a ‘stranger within’, for Serres’, this act of exclusion is always incomplete. The excluded instead constitutes a ‘return of the repressed’: “To chase: push out, drive out, uproot, dismiss, purge, repress. We repress what bothers us. What is repressed, but remains anyway, still parasitizes communication” (Serres 2007, 77).

As mentioned, on the one hand, within Leroi-Gourhan’s paleontology, the technical tendency imposes itself on the ethnic milieu, on cultures, and on societies, gradually giving them shape. On the other hand, however, humanity’s technical dimension has gone through history and western metaphysics unnoticed. In order to speak of ‘the human’, it has always been necessary to exclude the fact that this human being has, from the very beginning, been technologically mediated. In the midst of wars, scientific research, and economic affairs, technology has retained its ‘outside-yet-inside’ position, while reshaping such practices in the process. Its evolution follows a parasitic scheme, a parasitic relation within communication, or upon psychic and collective individuation. It appropriates and thereby reshapes interactivity and intersubjectivity, existing as a third-man-medium that must be excluded in order to have clear communication, while hiding, mutating, and spreading: “if you do not recognize the parasite, it is precisely because he goes through the whole fable and the whole system and that he is transformed as if by magic” (Serres 2007, 63).

In other words, technology has, throughout history and continuing today, radically altered human perception of being-in-the-world, introducing ruptures from the very beginning through the retention of epiphylogenetic traces, without its significance being properly noticed. Just as “our viruses cause us to form a rhizome with other animals” (Deleuze & Guattari 2013, 10), digitalization has seen sense-perception quite literally ‘go viral’, and in doing so has altered everyday experiences of space and time, the latter outstripping the former.

More concretely, by reducing technical objects to instruments, granting them no ontological significance but merely regarding them as functional objects, what is excluded is the fact that the technical object itself becomes an informative entity, transforming the environment into a technical milieu on which societies and organisms become dependent for their survival: “What counts is changing environments, having the means to change environments. (...) The parasite gets power less because he occupies the center than because he fills the environment” (Serres 2007, 95). That is to say, both parasites and technical evolution function by means of deterritorialization and reterritorialization, by disrupting systems and restructuring them in their own favor. In the same sense as noise is the ‘driving force’ of communication for Serres, the parasite, equally, is not merely a distortive entity within systems but holds a twofold relationship, in that it also creates novelty within them (Serres 2007, 67).

What can be proposed here concerning the status of the parasite, more specifically both the biological virus and the computer virus, is that they both have a certain status in relation to life-processes from which one can learn, precisely by not seeing them as isolated objects of study, but in their participation within broader processes which may provide a more detailed insight into their functioning (Dupré & Guttinger 2016). The following passage will carry this logic over to the occurrence of computer viruses in digital cyberspace, while demonstrating how they can be interpreted from such a relational and processual perspective.

Digital distortions and their life questions

If we take the computer virus as an example, they occur at the intersection between an increased and intensified implementation of a digitalized social space, while, at the same time, the threat of viral infection always remains hidden in the background, suppressed until crisis occurs. These computer viruses, the hidden disruptions within the system, in the same way also reshape the online space and the social world – the internet is shaped around them, translating into new social dynamics and political warfare of hacking and spying, to which the system, in its current set-up, only knows how to respond to by implementing more advanced security systems, such as encrypting, in order to be able to continue with ‘life-as-normal’ on the internet. The digital sphere is presented as a neutral space for social interaction but runs against the background of a fight for information and for digital space itself. All life becomes integrated into the dynamic of digital war and social life becomes a strategic game without borders. This may be seen as a ‘return of the repressed’ concerning the internet’s forgotten origin. The internet emerged as a product of cold-war technologies (Mindell et al. 2003), yet is presently experienced as a neutral medium whose history thereby vanishes.

The example of the dynamic between computer viruses and security systems provides an illustration of the ‘double-bind’ of the Anthropocene. As the technological system expands, indeterminacy and contingency must be avoided in order to reduce risks. Yet in doing so, the system is rationalized and accelerated, in that risks are not eradicated but simply replaced by greater ones, thereby leading to an ever-greater need for increased calculability and thereby a decreased potential for both sophistication and novelty which is, by definition, undetermined. What characterizes life is, however, its indeterminacy and its incalculability. The question becomes one of considering technology and technical artifacts in their potential to transform social relations and establish new social dynamics. In other words, what can be learned from considering technical objects and parasites through the way they shape systems?

The above characterization of the technical object as an object of repression, as the abject, both interior and exterior, may serve as an illustration for what Simondon, in the introduction of his work, *On the Mode of Existence of Technical Objects* (2017), means by his identification of ‘cultural xenophobia’ towards technical objects:

Culture thus has two contradictory attitudes towards technical objects: on the one hand, it treats them as pure assemblages of matter, devoid of true signification, and merely presenting a utility. On the other hand, it supposes that these objects are also robots and that they are animated by hostile intentions towards man, or that they represent a permanent danger of aggression and insurrection against him. And judging it better to cling to the first characteristic, it seeks to prevent the manifestation of the second and places machines in the service of man, in the belief that the reduction to slavery is a sure way to prevent any rebellion (Simondon 2017, 17).

In order to prevent a fundamental misunderstanding of the nature of humanity’s technical dimension and the subsequent ‘pathological’ behaviors, whether panic or fetishization, technical objects, machines, and human beings must be understood in terms of their genesis. That is to say, there is an individuation inherent to the technical object whose analysis must be studied and thought through in terms of the way in which it forms a system.

To open up to a future of technical life which preserves the undetermined in life, the question must be posed to what extent the relations between things, and not simply the relations between people, dictate the speed and the dynamics of contemporary societies, and whether, within this constellation, a source of indeterminacy can be retained: “Far from being the supervisor of a group of slaves, man is the permanent

organizer of a society of technical objects that need him in the same way musicians in an orchestra need the conductor” (Simondon 2017, 17). This acknowledgment may serve as an opening of a possibility for new forms of individuation to occur, one in which the indeterminacy of different forms of life may be preserved. Such indeterminacy can only occur once technology is freed from its role as ‘slave’ and instead regarded as something that is both part of the world, as well as constitutive of any notion of ‘the world’ to begin with.

Conclusion

What is at stake in the above considerations is the question of the status of individuation, both psychic and collective, as well as technical, in an age of digital cyberspace. Stiegler’s analysis gives rise to a notion of the human being as a process of transformation through the use of tools, these tools gradually forming a system in which the human relations to immediate surroundings become ever harder to grasp and coherently maintain. Technology cannot merely be understood as a means to an end, but necessarily as an element within human life which is irreducible to a supplemental function. It can instead only be grasped through its participation in, and transformation of, human activity. The internet and data industries can equally not be reduced to a mere invention of the 20th century, but instead, their occurrence can be understood as the outcome of an extension of and a rupture within human, social and technical individuation.

Serres’ analysis shows the importance of considering all life and non-life processes as systems of relations. This allows for the mode of being of the mediator, the technical object, to be transformed following a parasitic scheme. This may imply seeing both the computer virus, as well as technology at large, not as individual isolated objects, but necessarily as part of broader assemblages and in turn as something which both forms and transforms communities and systems. It therefore follows that the status of the ambiguity of parasites resembles the ambivalence of technology, in that they both undermine the system’s logic as well as actively shape, thereby transgressing any clear boundaries between ‘inside’ and ‘outside’.

To think towards the future of technical life is primarily the question of the relationships through which one becomes a ‘who’, a subject in a position to take responsibility for the future, as opposed to becoming de-subjectivized within today’s global formation. Understanding life in its technical forms could imply understanding its function as both parasitic as well as symbiotic, both as remedy and as poison. In contrast to a virus which initially harms the cell, technics have, from the very beginning, allowed for the human form to emerge, for psychic and collective individuation to take place. However, a failure to adequately pose the question of its status within life and of the relations it currently establishes and maintains, that is, the potential destruction it can lead to at all levels, from the psychic to that of the biosphere, inevitably leads to further blindness and further crises, further individuation. Positing the status of technology as inherent to life leads to the acknowledgement that it forms the memory of the lives of future generations and provides a hint for what it means to think of technology as a symbiont. In an algorithmic consumerist society geared towards function in real-time, the future is largely forgotten. Our activity today, however, shapes the future world. Any societal model laying claim to being ‘rational’, and not simply ‘rationalized’, must take this fundamental dimension of technology into account, instead of such questions being suppressed under the imperative of further expansion.

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Signs of Life: *Closing the Chasm Between Cultural and Micro-Biological Life*

Constantijn-Alexander Kusters

When the word ‘life’ is used, what is usually imagined is the type of life most relevant to our direct experience. Trees, Bees, and Anchovies are all well understood as life, and while the glimmering eyes of fish might be uncomfortable to some, they firmly remain within the types of life we can experience directly. When it comes to microbiology however, things become different. Whether it is the smallness of the life involved or the alien-like figure of the blob-like bodies underneath a microscope, microbiological life seems much further away from the life we are familiar with. Unfortunately, this brings with it some serious risks.

Understanding life on merely the level of animals and plants, or worse and more restrictedly, merely on the level of humans, brings with it significant blind spots hampering our capacity to understand ourselves insofar humans are part of, and dependent on, the larger biosphere. As research shows how microplastics do not only harm human cells, but are slowly but surely expanding their presence in all parts of our ecosystem, from the Mariana Trench, to the food we eat, and the air we breathe, the othering of our microbiology as something not like us, is more likely than ever to become a serious problem. Similar problematics could be sketched in relation to the climate, biodiversity, or antibiotic-resistant bacteria. This essay will attempt to narrow the gap between the experience of human life and the microbiological structures with which it is inevitably interdependent. In doing so, it will provide a sketch by which relating these differing biological levels to the human experience can be done in a continuation of scaffolded sign processes.

To achieve this narrowing of difference, the paper will draw attention to the structure of animal/human life experience and the manner by which meaningful processes can also be found in microbiological systems. In turn, it will seek to show how through this realisation the phenomenological experience is not just similar but a continuation of the microbiological structures below it. To do so, the proto-biosemiotic lens will be introduced by first discussing Jakob Johann von Uexküll’s *Umwelt* theory which integrates sign systems as a fundamental part of animal experience. Following this, a basic understanding of the Peircean semiotic triad will be developed which is prevalent, if not central, to the biosemiotic framework. Finally, these will be used to better understand the biosemiotic program as a manner of seeing all biological life as semiosis.

Harmonising *Umwelten*

One of the most prominent inspirations for the biosemiotic paradigm is Jakob Johann von Uexküll. Born in 1864, the Baltic-German zoologist’s research interests were primarily focused on the behaviour and interaction of what he called ‘animate nature’, in which he included both animals as well as such things as organs and cells. Through his work von Uexküll laid the foundations for both theoretical and behavioural biology (Kull 2001). For von Uexküll, signs are of great importance for all aspects of life processes as they constitute the natural sign systems which precede those signs we use in our language. It is particularly the capacity of living creatures to deal with their environment through sign systems which allows for what we would now call a type of plasticity towards the world. He distinguished between animate and inanimate nature, which are distinct from each other insofar as animate nature can react non-mechanically and purposefully through stimuli. This distinction is important as it informs the basis of von Uexküll’s research method, a method he called *Umweltforschung*, or *Umwelt*-research.

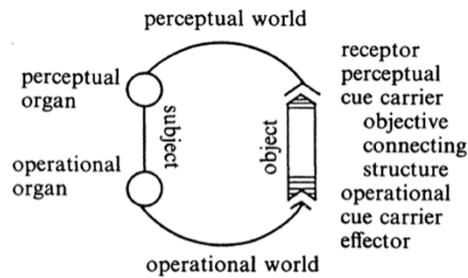


Figure 1 *The functional circle*

Umwelt-research is aimed at the investigation of how animals interact subjectively with their environment and each other. According to von Uexküll, every animal has what he calls an *Umwelt*, a kind of model, or projection, of the world created through the sign systems the animals possess and the manner it can relate to these. Effectively this *Umwelt* creation comes down to the world being meaningfully and subjectively distinguished through the coming together of the capacities to perceive and operate. An example of this might very simply be that on the level of perception one animal has receptors capable of perceiving ultraviolet light while another cannot. On the level of operation, a tree perceived is not the same in the *Umwelt* of a woodpecker - which looks for food in trees - and a bear - which rubs a tree with its back as a form of inter-species communication to attract mates. Even within the same animal the tree perceived at a different time could change insofar its capacity or necessity for acting has changed. A deer might for instance perceive a dangerous watering hole very differently when parched, in contrast to when it is well-hydrated. The investigation into the *Umwelt* of animals therefore requires not only a close analysis of the perceptual world (Merkwelt) of the animal which is dependent on the of senses that it has, but also the operational world (Wirkwelt) (Kalevi 2001, 7) of the animal, relating to what it perceives as an actor, both of which come together in a functional cycle where the operational follows and extinguishes the perceptual in such a way that the perceptual input is re-signified by the operational as seen in the figure above. It is here also that von Uexküll differentiates between animals and plants as plants, according to him, only have perceptual organs, not operational ones. Thus, while plants have a perceptual world, this is not enriched in relating operationally and therefore does not constitute an *Umwelt*, instead they are merely “*dwelling*” (T. von Uexküll 1992, 301).

To position plants as dwelling might unjustly imply a devaluation of their role in von Uexküll’s view on their function as sign systems within what we would now call the larger semiosphere. *Umwelten* and sign systems in general, much like our modern understanding of evolutionary niches or semiotic niches in the biosemiotic framework, form the basis for the signified interaction of animate matter with its environment. As such, the sign processes of plants play an unmistakably vital semiotic role within the larger semiosphere — the semiosphere is the larger environment of semiotically significant interplay. As a semiosphere of sign systems, plants, animals, bacteria, etc, are all of vital importance in creating an environment within which all of animate nature together forms an orchestra of meaningful and harmonised existence, an existence in which even inanimate nature, as possible sign-carrier, is included. Phrased more poetically by Jakob von Uexküll himself:

“If the flower were not bee-like,

If the bee were not flower-like

The harmony would never succeed” (J. J. von Uexküll 2010, 198)

This very short poem conceptually hits at the core of von Uexküll's project, namely that the biological environment cannot be understood by isolating one creature or cell from another as a singular organism, but must instead be seen as a whole within which roles can be played by particulars which can only exist in relation to others whom they harmonise with as integrated parts of the semiosphere.

The reason von Uexküll's work would become so important to biosemiotics is the fact that *Umwelt* creation, or any living/animate process for that matter, is fundamentally understood as a sign process, or a coming together and mediation of various sign processes. When von Uexküll then described both the perceiving and operating discussed above, he did so by describing the organs as functioning in terms of sign operations. As such, his *Umwelt* theory becomes fertile ground for integration with the arguably more developed system of semiotics found in the American semiotician Charles Sanders Peirce.

Semiotic Teleology

Charles Sanders Peirce's writing is notoriously inconsistent with itself: changes in terminology, or even outright objection to his own previous statements are common within his oeuvre. As such this essay will rely on Thomas Short's reconstructive interpretation of Peirce's ideas as found in his book aptly titled *Peirce's Theory of Signs* (2007). This approach will allow us to skip some of the minutia involved in Peirce interpretation and move towards a view of his theory of signs directly relevant to the case of biosemiotics. Before starting with his theory of signs however, we will first discuss the case for what Short calls 'purpose', which will play a central role in both his situating Peirce's semiotics and his disagreement with the biosemiotic paradigm at large.

Central to Short's interpretation of Peirce is his conception of purpose. He starts out with his concept of purpose by making the distinction between mechanistic causes and teleological explanation. First, he posits that in addition to mechanistic laws there are realities of our world which are of an anisotropic kind. We consider those processes anisotropic which have direction and are irreversible. Short's example of anisotropy considers the Second Law of Thermodynamics and how, as an explananda, it helps us explain that heat dissipates over a given area, yet this explanandum does not allow us to retroactively find the place from which this heat dissipated as equilibrium leaves no trace of the directional process which brought it about. In this sense, the Second Law of Thermodynamics describes the process of entropy which directs towards the end of equilibrium but cannot be explained by causation, because the process itself is irreversible. Similarly, and maybe more clearly, we could consider the process of adding sugar to our coffee. After each sugar crystal is added to the coffee and the brew is stirred, no sugar crystal will remain in the now sweetened cup of coffee. Of course, we can measure the amount of sugar in the coffee, and we recognize that what has happened is a mechanistic process, but no amount of reverse stirring is going to give us information about the number of sugar crystals we started with. This directedness of the anisotropic Second Law, and coffee spoiling, shows us a tendency from order to chaos through entropy, or dissolving. Usually however, in describing teleology, we mean the opposite — going from disorder to order. As such, Short makes a distinction between the anisotropic in general, and a subdivision which he calls teleological — tending from disorder to order, sometimes also called negentropy.

The teleological tendency in biological life lies for Peirce in the fact that there is "*a type for which selection is made. The selection can be made consciously and deliberately, as by a human agent, or, in Darwin's phrase, naturally, by no agent at all*" (Short 2007, 138). This alludes to the fact that for forms of biological life to not stop existing, there must be something which is selected for, like genes, which can bring certain forms of life into the future. We call this tendency for certain biological constellations of order to keep stable and evolve into the future, the purpose for which is selected; "*a purpose is a type of outcome for which an agent acts or for which something was selected as a means*" (Short 2007, 110). Important here is that what is selected for in this biological context

is not always what is selected insofar as a genotype and phenotype can be differentiated from each other. As such, natural selection is not said to have a purpose, but to be purposeful insofar as its tendency is something which is directed and selected for from random mutation. In less academic language one might say that, from the framework of natural selection, this simply states that for any tendency towards order to exist, and keep existing, progressive series will be selected for their capacity to reproduce, indirectly selecting for heritable mutations which favour this purpose. To fail to select for the purpose of tending towards order would then be an automatic dissolution of this tendency and a dead-end for the trend's continuation.

For Peirce's theory of signs proper, this paper will focus on the triadic nature of the Peircean semiosis and the importance played by purpose while leaving out some specifics about differentiations in objects, interpretants, and signs which are not necessary to the ends of this paper. The triad is made up of an interpretant, sign, and object. We can understand this relation best in terms of a process of interpretation in which "R [Interpretant] *interprets X as a sign of O* [Object]" (Short 2007, 158). To put it into words it can be said that for a dog, as interpretant, a smell can be a sign for an object, namely food. The purpose of the capacity for the smell to signify food is then found in the fact that both evolutionarily speaking, and in relation to the experience of the animal, that particular smell signifies the possibility that food is nearby which could feed the animal. In this sense, purpose is that which makes signifying the object in the sign possible, a project which is fundamentally open to failure and whose repeated failure might thus affect the animal's chance of survival and reproduction as it can also change the behaviour of the animal through its capacity for learning. The reason we keep returning to the concept of purpose, even here, is that the triadic system, by being capable of failure in light of its teleological direction, is also capable of being selected for in terms of its relation to that purpose which puts the triadic system as the fundamental motor of evolution.

Before closing off this section, it must be said that Short himself is not a biosemiotician. In fact, Short expressly states that he disagrees with biosemioticians such as Sebeok, Emmeche, and Hoffmeyer, as he does not think that Peircean semiotics can be extended to all of life. Short argues that signs necessarily possess intentionality, as they need this for the signifying to point towards a possible object. He states that "*explanation of intentionality is in terms of purposeful action, and not in terms of final causation* [what this paper has crudely lumped in with teleology] *in general, much less in terms of anisotropy (Peirce's 'finiosity') in general. Outside of purposeful action, which appears to be limited to animals, no mistakes are possible, and where no mistakes are possible, there can be no intentionality, hence, no interpretation; but all significance is relative to potential interpretation*" (Short 2007, 177). What is notable here is that Short is expressly moving against the purpose of this essay. By limiting signification to purposeful action, he makes a break precisely between the world of experienced consciousness and the microscopic biological levels — and even plants and fungi — which we sought to bring closer to us. In the next part we will however see how this limiting of signification, and with it signs, to the phenomenological experience of animals goes against much of the empirical descriptions biosemiotics seeks to explain.

Theses on Biosemiotics

While consciousness undeniably experiences meaningful purpose, biosemiotics seeks to go further than this and include all biological organisation into the purview of meaning. To give an overview on how they seek to do this by combining both the Peircean and Uexküllian views in a scientific paradigm, we will follow how biosemiotic project was presented in the journal *Biological Theory* by some of its more prominent exponents in a paper titled *Theses on Biosemiotics: Prolegomena to a Theoretical Biology* which sought to "*articulate a set of common assumption shared among a group of researchers, who ground their work on a strongly Peircean framework*" (Kull, Deacon, et al. 2009, 168). Along the way, examples from the biosemiotic, and related, literature will be injected to illustrate the significance of the theses stated in the paper. The paper sets out eight theses about biosemiotics of which we will discuss the four which are most relevant for the goal of this paper.

The first of the theses states that “*The semiotic-non-semiotic distinction is coextensive with the life-nonlife distinction, i.e. with the domain of general biology*” (Kull, Deacon, et al. 2009, 168). In other words, for the biosemiotic project, the investigation into the domain of biology is fundamentally an investigation into the semiotics which make up this domain. This considers biosemiotic relations, as relations which are not merely determined mechanisms but must be considered “*only in conditions under which there is explicit or implicit representation of an end state*” (Kull, Deacon, et al. 2009, 168). This explicitly disagrees with Short’s interpretation of semiotics as requiring conscious intentionality. The biosemioticians place the triadic structure of signs as a manner of understanding the entire biological domain. A strong example of the prevalence of signs in biological organisation can be found in the work of Marcello Barbieri, an embryologist whose work is still highly relevant to biosemiotics even though he no longer considers himself a biosemiotician (Barbieri 2014). In his book titled *The Organic Code: An introduction to semantic biology* (2004), Barbieri sets out to describe what he calls “*a new theory of the cell*” (Barbieri 2004, 5) by describing the code based cellular mechanisms in significant overlap with Peircean semiotics. A code, according to Barbieri, requires “*three entities: two independent worlds and a codemaker which belongs to a third world*” (Barbieri 2014, 5). The triadic similarity with Peirce is that the interpretant and objects as two different worlds are connected meaningfully through a third world called the sign. For Barbieri however, as opposed to some biosemioticians, meaningful is here meant as an inherent property of the system itself, not a type of interpretation or *Umwelt* building. More particularly, Barbieri describes the creation of proteins in this code-based manner by taking as the two independent worlds; DNA (as object) and proteins (as the interpretant/reaction), while RNAs (as adaptors/signifying signs) take the role of codemaker. In this manner, the RNAs are capable of relating the information in the DNAs by building a protein chain. Although this is a rather simplified model, it does show that code-based biological relations are very much present in how we understand our bodies to work, something which finds increasing relevance as new code-based processes are discovered throughout the body (Barbieri 2009).

The second of the *Theses on Biosemiotics* states that “*Biology is incomplete as a science in the absence of explicit semiotic grounding*” (Kull, Deacon, et al. 2009, 169). In making this their second thesis, these biosemioticians explicitly attack what is sometimes called the Neo-Darwinian paradigm or the modern synthesis — this is a gene-deterministic paradigm which is held by some biologists which marries the Darwinian evolutionary theory with a focus on the heritability and mutation of genetic material. The importance of this attack is the position biosemioticians take to what they consider the reductive view which takes “*life as mere molecular chemistry*” (Kull, Deacon, et al. 2009, 169). Part of this critique of the focus on gene-determinism is for instance the more Uexküllian view that evolution can only be understood within the larger context of the semiosphere whereby what is selected for is selected for as part of the semiosphere it has to harmonise with.

The sixth thesis states that “*The grounding of general semiotics has to use biosemiotic tools*” (Kull, Deacon, et al. 2009, 170). This thesis is significant as it signals a clearly non-dogmatic relation to semiotics and the Peircean conception of it particularly. Also, it relates to von Uexküll who equivocates perceptual and operational organs with sign systems, thus also leaving the content of semiotics open to empirical investigation and eventual modification. The main takeaway is that biosemiotics aims at being a serious scientific paradigm which, while using semiotics as a helpful theoretical model, must still rely on the empiricism present in any proper science.

The eighth and final thesis states that “*Organisms create their umwelten*” (Kull, Deacon, et al. 2009, 172). What is made clear by this thesis, and its use of the word *Umwelt*, is of course its relation to the earlier discussed *Umwelt* theory present in von Uexküll’s work. Explicating the inability to understand organisms in isolation from their world as they project them — a position which more generally is also held by some evolutionary theorists not associated with biosemiotics (Laland, et al. 2014). The thesis also expressly states in agreement with von Uexküll that organisms have a self-centred world which can extrinsically be

understood in terms of its semiotic niche — a semiotic niche is “*the totality of signs or cues in the surroundings of an organism which it must be able to meaningfully interpret to ensure its balance and welfare*” (Kull, Deacon, et al. 2009, 172). In his book, titled *Biosemiotics*, Hoffmeyer argues that this approach to biological life also has the express benefit of de-spiritualizing the materialistic sciences by building “*virtuality*” — the experience of the lifeworld as if it is real — “*into life from the very beginning*” (Hoffmeyer 2008, 176). More specifically related to the purpose of this paper, the de-spiritualizing of consciousness, which embeds it within a larger framework of biosemiotics, also coincides with how it can be understood in relation to microscopic life.

Closing a Chasm

What the above five theses leave us with, is a scientific program which incorporates much of the previously discussed ideas of Peirce and von Uexküll. By framing semiosis as the domain of biology, both microscopic and culturally mediated semiosis open up to each other in the domain of semiotics. The elegance of this approach is that, as discussed earlier, instead of having unexplainable breaks between our knowledge of biology and that of cultural experience, we get a shift towards a more coherent gradient of semiotic significance which spans the totality of meaningful biological interaction. This of course does not proclaim absolute knowledge of any particular process, but, as described above, gives science a broader framework from which to do research.

One of the more prominent exponents of this framework, who is also a co-author in the previously discussed paper on biosemiotic thesis, is the neuro-anthropologist and biosemiotician Terrence Deacon. He describes the possibility of life’s genesis in his paper *How Molecules Became Signs*. By framing the beginning of life as the beginning of semiosis, Deacon does not describe a materialisation of some essentialist subject, no experiencing subject coming down from heaven. Instead, we find in Deacon’s proposal the slow emergence of signification and differentiation of a *subject* in a process of selection which actualizes the possibility of a teleological tendency in lieu of the Second Law of Thermodynamics. Purpose then, as we have discussed in relation to Peirce, becomes the manner by which selection occurs even in the smallest and most primitive forms of life, even as it emerges from natural law and chemical processes. Against Short, this interpretation shows the emergence of signs as the emergence of life itself. Intentionality then shows as that which makes it possible for life to fail in relation to its being selected for, a failure in its own recursive self-constitution. By theorising the genesis of life as the genesis of semiosis, Deacon adds to a semiotic understanding of biology the capacity to conceptualise a complete continuation starting in chemical processes and ending in our phenomenological experience, all within a continuous framework of developing sign systems, a large part of this work following the emergence of life is found in his *Incomplete Nature: How Mind Emerged from Matter* (2011).

Connecting microscopic life and culturally mediated experience does not mean, however, that there is no more difference at all. Instead, the difference has become legible in kind, a continuance between the world of microbiology and that of experienced lives. Through von Uexküll’s *Umwelt* theory, the variety of semiotic life-worlds become understood not merely in terms of what we might experience ourselves, but also as something which might manifest itself differently among different types of semiotic niches. No biosemiotician would tell you that your experience is equivalent to that of a cell reacting to its environment. What is of significance, however, is that the reaction of a single cell is now directly related to this human experience. Even more so, a cell in your body is a necessary underlying scaffold which is an integral part of what makes up our consciousness as a semiotically emergent property of our biological system. Not unlike when von Uexküll asks us not to understand a creature in isolation, but as part of the semiosphere, so do the cells of our bodies make up part of and relate to the larger function of the conscious human. More specifically it can be said that in merely understanding our consciousness as emergent property, a type of essentialism is imparted which, especially in light of the biosemiotic framework, isolates a consciousness

from what makes/made it possible in the first place — the semiosphere which includes not only the world around this consciousness but also all the biological scaffolding necessary for the consciousness to emerge in the first place.

It should not be mistakenly believed that in relating our consciousness to the death of the one million cells which die in the cycle to keep our body alive should be grieved. As mentioned above, difference, also moral difference, can still be considered in light of the semiotic richness present in life— although a discussion of this is outside the scope of this paper. What we can, and should, deal with is the fact that by realising ourselves as not just in kind with, but fundamentally part of the microbiology, its world is our world. If we understand that our cells react to their environment, dying when their semiotic capacities do not align with the environment in which they are present, then to change the environment from that which they were signified for severely cuts down their capacity for sign-mediated *action*. Just as a German in France might not know how to order food, so will cells not know how to deal with plastics. But where the plasticity of human semiosis might make the German capable of pointing at the croissant and convincing a Frenchman to give him one, the plasticity of cellular life might very well not prove so robust as to survive in an environment polluted by microplastics, an artificiality it evolutionarily seems woefully underprepared for. As it stands, cellular life is in fact also us, it is through biosemiotics we can come to grips with the fact that affecting the environment on a microbiological level directly relates to what we are. The manner in which we experience the world around us is closer to cellular life than one might expect. For our health, it then becomes of vital importance to grant also the microbial world its rightful claim as a semiotically interwoven part of life as life.

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Defining the Moment of Death

Charles Smoot

This essay concerns itself with both the historical and more contemporary definitions of human death within the field of medicine. These include, but are not limited to, higher brain death, brain stem death, and cardiovascular death. Each of these definitions of death provides us with explicit criteria of how to determine when someone has died. It should be stated that it is not only the definition that is of concern but also the underlying assumptions that take place in the creation of these definitions. While different countries and cultures have adopted their own definitions to suit their systems, many medical practitioners and philosophers are convinced that there needs to be a clear and precise moment of death. However, death is neither clear nor precise, thus the objective of this essay is to support this claim of ambiguity. In following a similar line of thought from Winston Chiong, death will be redefined or perhaps undefined, using the Wittgensteinian terminology of games and family resemblance, and similar, more recent, terminology developed by Putnam and Kripke. I will start with a more traditional understanding of the debate environment and where it stands. Then I will introduce the notion of a rigid designator and how it may reshape our ability to define with precision. Finally, I will present the concept of life and death as a property cluster.

II. Traditional Model, Definitions, and The Problem

Consider a person in a hospital going through a series of organ failures. Starting from the kidneys to the spleen all the way down to the heart and brain until there is nothing left to fail. Presumably, we would call this process one in which the person is dying. While some have considered redefining death not as a determinate event but rather as a process, such a move is not the one I will be taking here (DeGrazia 2021). While this kind of view certainly provides the greater complexity and nuance that I too endeavor to bring forth in this discussion, it says little about when the so-called process has ended. Thus, the question that is relevant to our discussion here, is at what moment, during this progression of organ failures, should we consider the person to be dead? Of course, if we left the individual writhing in the hospital bed for a long enough period of time, we would surely be presented with a dead body. But this is not a particularly interesting proposition to engage with, since if you leave any person anywhere long enough, they will inevitably die. What is however interesting, is that certain organ failures rather than others can radically accelerate this progression towards death. For example, while the failure of my spleen is catastrophic, it is not death-inducing, whereas the failure of my brain does appear to induce death.

The more traditional approach to defining death adopted by many medical practitioners and philosophers is performed by means of determining what, if any, are the necessary and sufficient conditions for death (DeGrazia 2021). In other words, defining the essence or aspects that are responsible for the event of death to occur. A useful tool in this inquiry might be the deceptively straightforward question about what the essence of a chair is. Possible answers include that a chair must have legs, but such a simple essence proves to be problematic as I too have legs, but am not a chair. Furthermore, a bean bag chair, as the name implies, is also considered a chair yet features no legs of any kind. What, then, constitutes the essence of the chair? This point merely serves as an introduction, for those unfamiliar, to the general problem that is being contended with. Nevertheless, we often contend, in some cases and in regards to some objects, that despite the difficulty surrounding such a question, an answer is possible. As for now, I will bring the focus to the notion of death.

For our understanding of the problem at hand, death is the negation or lack of life. When considering essences, we should ask: What are the necessary conditions for living, that if a person existed without them, they would most certainly no longer be living? This question has been answered in several ways throughout the history of medical practice. Each view is unique in some cases to the cultural environment from which they arise, resulting in both medically grounded and religiously grounded descriptions. For the sake of clarity and focus, this paper tends to the three leading medical criteria for death. Those are Higher or Total Brain Death, Brain Stem Death, and Cardiopulmonary Death. I also admit that there exist lengthy appeals to personal identity as answers to the question of death. However, while important, it is not within the scope of this paper to discuss them at length.²

When we think about the example of the dying patient, one might be tempted to change the chronological ordering of the patient's failing organs. Supposing that we do start with the kidneys, we might find, and often do, that a person can continue living. Therefore, we would not suspect that a lack of the kidneys is a necessary or sufficient condition for death. On the other hand, if we start with the heart, the patient dies soon after. Thus, there exists a claim that the lack of a heart is sufficient for death. This sort of simplistic thinking serves as the basis for one of the more traditional views of death namely, the cardiopulmonary view. A more formalized and precise approach to the construction of such definitions, useful to this discussion, has been proposed:

This analysis of brain death should be conducted in three sequential phases: (1) the philosophical task of making explicit the definition of death that is implicit in our traditional conception of death; (2) the combined philosophical and medical task of identifying the criterion of death—that generally determinable standard that shows that the definition is satisfied by being both necessary and sufficient conditions for death; and (3) the medical task of devising a set of bedside tests to show that the criterion of death has been fulfilled. Thus, the optimal sequence of argument must proceed from the intangible and conceptual to the tangible and measurable (Bernat 1992, 21-22).

In the case of our progressive organ failure example, we have identified the second stage of this process. But before we get ahead of ourselves, we must also identify the first. Perhaps two of the most commonly used standards for the first part of the definitional framework is first, the permanent cessation of the integrated functioning of the organism as a whole, or second, the departure of the animating or vital principle. For our purposes, the first 'permanent cessation' standard will be prioritized.³

The traditional view of death that was most commonly adopted around the world, and still is so in some parts and by some persons, is the cardiopulmonary criterion. This criterion is defined by the permanent cessation (1), of both the circulatory and respiratory systems (2). According to this criterion, the most basic test used to determine if someone is dead (3), is to check for one's pulse or lack thereof. In simplistic terms, no pulse, no breath, no life. In more recent developments, we have seen a transition from this cardiopulmonary view into the more accepted brain death view. This view, as previously hinted at, can be separated into a couple of variations each of which satisfies Bernat's second criterion differently. For example, the whole-brain death definition is satisfied by the irreversible cessation (1), of the function of both the higher brain and the brain stem (2). The loss of the functions of the higher brain results in the loss

² This appeal in particular suggests that death has to reflect our intuitions or view about the identity of persons. This can manifest in a couple of ways: first, that humans are conscious beings with memories, and as such the loss of consciousness must be a central condition of death. Second, that consciousness is what makes the identity of persons unique to animals, and our definitions of death should therefore reflect that. This however is not the only view of personal identity, as more materialistic conceptions do exist. See Green, M. and D. Wikler, 1980, "Brain Death and Personal Identity," for a more detailed discussion.

³ Such a baseline may be subject to further philosophical investigation. However, and for the purposes of this essay, such investigations will be put to the side.

of consciousness which can be (3) determined through a combination of physical examination, and ancillary and apnea testing. For example, one could check for the responsive muscular reflexes of a person, while also checking for the partial pressure of the CO₂ within the body to determine if the brain has the capacity to respond to external stimuli. The inclusion of the functions provided by the brain stem separates the total brain approach from the higher brain approach. While the higher brain approach certainly provides us with criteria that are necessary for death, it does not provide sufficient conditions. This is what leads people like Bernat to support the whole-brain approach, as it is the most satisfactory answer to his definition test. Although the claim that the higher brain approach is more satisfactory to our views on personal identity, it presupposes a mind-centered view about the nature of the subject, which requires its own justification (See Footnote 1). Nevertheless, it could be claimed then that the whole-brain criterion provides a more satisfactory answer to this concern as it includes consciousness and other factors.

Despite each of these definitions satisfying Bernat's definitions tests, albeit to varying degrees, each of them has come under attack and received constant revision. For example, Shewmon's meta-analysis has shown that some patients do recover after a one-week period of being pronounced brain dead (Shewmon 1998, 1539). Whether or not this is a failure on the part of the physician to properly measure brain death (Bernat's third criterion) has been deemed insignificant. This led Shewman to conclude that the brain's position as the centerpiece is problematic (Shewmon 1998, 1544). Another, and less physiological, argument against brain death from Ingmar Persson has claimed that the current models of definitions do not include the beginning of human life into the equation. His argument follows from the idea that human persons begin their existence without a brain, only to acquire it later, and thus the brain cannot logically entail one's death (Persson 2002, 22-23). Both of these arguments have made the claim that there is something wrong with the current model for identifying dead persons. Shewmon's analysis, in particular, provides an interesting counter example while Persson exposes a conceptual inconsistency. In either case, one might be so inclined to claim that this is the result of our inability to properly identify what is consistent in all dead things.

While there are many ways in which a person could respond to objections from Persson and Shewmon, including a position developed by Bernat (1998), this is not the direction this essay will be taking. What is of concern is not the specific problems that Persson and Shewmon are illuminating, but a more general problem with the reliability of descriptions. As I previously suggested, one might be inclined to assume like others that this is a problem of identification. However, as Winston Chiong argues, it is not the case that we have simply not identified the right kind of essence or collection thereof, but rather that it is the fault of definitions themselves that has become problematic (Chiong 2005, 22). In particular, it seeks to challenge the very framework that Bernat supposes is suitable for medical death.

III. Rigidity, Language, and Essences

To challenge Bernat's definition criterion let us first take a look at some counterexamples provided by Chiong. The first counterexample suggests that someone undergoing irreversible cardiac arrest, despite temporarily maintaining consciousness, would be considered dead on the cardiopulmonary view (Chiong 2005, 22). The second suggests that persons in a permanent vegetative state are clearly unconscious, yet retain many other homeostatic faculties that suggest that a person is still very much alive in a biological sense (Chiong 2005, 23)⁴³. These examples are intended to give rise to the failure of a description's ability to properly grasp what should be included in the notion of death. It falsely equates the description of the permanent cessation of organic functioning with death itself. In order to determine what should be included,

⁴ Homeostatic faculties could include the likes of energy balance, maintenance of body temperature, recycling of cellular waste, and the fighting of infections. This is not an exhaustive list and should not be treated as such. It rather serves as an example of other bodily functions that can and often are maintained in the absence of other ones.

we should look at further developments in the philosophy of language (Chiong 2005, 23). This approach involves taking a look at the developments of three authors, namely, late Wittgenstein, Kripke, and Putnam. Kripke and Putnam, in particular, propose two arguments against the ability of a definition to actually 'refer' and thus we start with them.

Saul Kripke provides a kind of intuitive account about reference, while simultaneously attacking the previously established descriptivist position. Kripke takes the position of the descriptivist to say that a name is determined by its descriptions (1980, 61). Descriptions are qualities, properties, or in some cases definitions that are attributed to a particular name. The key point being made by the descriptivist is that names and their description are inseparable from one another – to have another description is simply to refer to another name.

It is not so much that Kripke finds the descriptivist position utterly useless, but rather that it suffers when taking in counterfactual considerations. Thus what Kripke is trying to do is provide an account that strengthens the connection between referents and their objects. The core of Kripke's thesis and subsequent criticism of the descriptivists rest on the term of the rigid designator. To quote Kripke "*Let's call something a rigid designator if in every possible world it designates the same object*" (1980, 48). The most basic example of something as a rigid designator would be a mathematical expression. In all worlds, the sum of one and two will be the same, it simply cannot be different. It is important to note that something can only qualify as a rigid designator if, for every world such a thing does exist, it is the same⁵⁴. On this note, while it is in a sense possible for someone to conceive of worlds where particular rigidly designated things do not exist, there would simply be no referring quality. In addition to mathematical expressions, Kripke thought that names themselves were rigid designators. Names, or proper names, are to be understood as something that refers to a particular person or thing. In Kripke's case, since names are rigid designators, they will refer to the same person in every possible world.

On the flip side, when something is not a rigid designator, and Kripke holds that descriptions are such a thing, then their status as necessary is replaced with contingency (1980, 71-77). While descriptions are contingent, it does not imply that they do not refer at all, but rather refer only to things that are not necessarily true. To cite his example on Gödel, Kripke suggests that when I refer to Gödel as the author of the incompleteness theorem, it is entirely possible that I do not refer to this specific Gödel but rather someone else (1980, 84). This is because my reference to Gödel is contingent on the fact that he proved the incompleteness theorem, and if it was not Gödel, but Schmidt who proved the theorem, then I would be referring to Schmidt (Kripke 1980, 84). To be more clear, when I refer only to Gödel, I am referring to Gödel due to his name's status as a rigid designator. Whether or not my use of the name Gödel is referring to the person who proved the incompleteness theorem is contingent. Therefore descriptions cannot necessarily refer with absolute certainty. In terms of death, if our definition of death is not a rigid designator, then it cannot necessarily entail one's death. In other words, our definition of death may, in some counterfactual cases, fail to properly refer to dead persons.

One might be rightly concerned with the relevance of the previous example's focus on names and persons. A claim could be made that unless we are talking about something like the character of Death, perhaps the cloaked scythe-wielding individual, the previous example will not say much about the nature of the death phenomena. However, this is to mistake the use of rigid designators to be limited to the use of names or mathematics only. As previously mentioned, the rigid designator is meant to describe something that is necessary for all possible worlds. This rigidity, in many ways, expresses a similar kind of essentialism

⁵ It should be noted that this is a particular version of Kripke's rigid designator. There also exists alternatives whereby the object does not need to exist in the possible world for it to have referential potency.

that we contended with at the beginning of this essay, namely: what is the central property of a chair that is the same for all chairs?⁶⁵

This expansion of the rigid designator term is central to this discussion and is adopted in later works of both Kripke and Putnam's. What this expansion entails, is the inclusion of natural kinds into the category of rigid designators. A natural kind, for those unfamiliar, signifies objects or things that are constituted in nature rather than through direct consideration, interference, or construction by human persons. Therefore, things like chairs would not satisfy the conditions of a natural kind whereas something like water does. To prevent further confusion on this matter, while it is possible for a person to manufacture something like water in a laboratory setting, this is not enough for it to be disqualified as a member of a natural kind, since water can and often does manifest itself without human intervention. We see this expansion of the term play out in Putnam's follow up to Kripke in "Meaning and Reference" through the famous twin earth example⁷⁶. His thought experiment follows a similar pattern to that of Kripke's, but rather than engage with names, he does so with the molecular structure of water. The result is nevertheless the same. The claim that water is H₂O, is contingent on the external reality of what water is. Once again, the descriptions do not necessarily refer to their designated objects. This lack of necessity of reference in a definition is what Putnam calls an operational definition: a definition that is sufficient given what is empirically available to the persons using it.

Given that Putnam's operational definitions function based on the external observable qualities, one might question as to how this is a concern for Bernat's definition test. On the one hand, extending the concept of rigidity towards objects of natural kinds ensures at the very least that such a definition could exist. This is because for something to be the same in all possible worlds, or even the same in just this one, there must be something consistent across all things of that kind. On the other hand, claims being made in favor of the rigid designation of names and natural kind terms requires a justification, beyond that 'it is simply the case'. Furthermore, the fact that a particular natural kind term has something consistent across all members of its kind, does not entail that the identification of said consistency is even possible⁸⁷. For emphasis on this point, we can consider some propositions from Wittgenstein.

Take, for example, this small passage in which he replies to the question about a language's essence: "Instead of pointing out something common to all that we call language, I'm saying that these phenomena have no one thing in common in virtue of which we use the same word for all - but there are many different kinds of affinity between them. And on account of this affinity or these affinities, we call them all languages" (Wittgenstein 1958, 65). In the passage that follows, he asks a question similar to the one proposed at the beginning of this paper, namely, what is the essence of a chair? He asks us to "look" and to not just default to demanding that all things share some commonality that is identifiable (Wittgenstein 1958, 66). By thinking of different games, ball games, chess, dancing, or other board games, we come to understand that certain "affinities" appear and then subsequently disappear as we continue to move from one game to the next (Wittgenstein 1958, 66). While there is certainly a lot in common between a game of checkers and a game of chess, there is far less so between chess and a game of baseball. Since the similarities between each member of this kind vary, in some cases dramatically from one member to the next, it becomes difficult in finding a satisfactory quality or essence shared among all members. By this observation, while not strictly denying that such qualities can exist, we might begin to embrace the futility of identifying them with absolute

⁶ Whether or not Kripke himself intended for this to be the case is still a much debated topic. This is partly due to the nature of Kripke's work which acts more as a reply to the descriptivist position rather than a positive account of a theory of reference or metaphysical necessity.

⁷ Putnam's Twin earth consists of two identical earths with one earth having the minor difference of water being XYZ instead of H₂O. If a person from each planet were to change places they would be wrong about their conception of water. Therefore even a description of water is contingent on the external environment. (See Putnam "Meaning and Reference" p. 701).

⁸ Both Putnam and Kripke have entertained this second thought to some degree claiming that the essences of rigid terms may be obscure or even downright inaccessible to persons. What the further implications are of this particular stance has yet to be fully fleshed out.

precision. Moreover, if we struggle to confirm the existence of the essence of something as simple as a chair, or something as common as a game, then by what means do we have the ability to determine the same in the case of life or death?

If any of the aforementioned discussions holds true, then the central problem in finding a proper medical conception of death lies not only in the referential contingency of definitions but also in properly identifying the rigid qualities associated with death. This alludes to the greater problem, the genuine inability of a framework such as Bernat's to provide a solid conception of death. If we are going to provide a conception of death which takes these problems into consideration, then it will be a non-standard variation that is not subject to the classical necessary and sufficient conditions.

IV. The Flexible Upshot Death as a Homeostatic Cluster Concept

The traditional way of generating definitions rested upon both a descriptivist and, to some degree, an essentialist account of what makes something uniquely identifiable⁹⁸. It required us to not only identify a property exclusive to the notion of life, but also to assure that such property is rigidly designated. In many cases, this process of identification is ultimately unclear if not entirely impossible. At the end of section one, I pointed to Shewmon's conflicting meta-analysis of surviving brain-dead patients. Up until this point, brain death has been an operational definition with some success. Moreover, if we hold the evidence brought forth by Shewmon's analysis to be true, then room for a new operational definition has appeared. However, as the end of section three suggests, there are fundamental flaws with this standard approach. So Shewmon's hesitancy to place the brain as the centerpiece of our death concept in our calculus seems to be well placed. By removing the brain as the sole centerpiece and replacing it with verifiable contingent conditions for death we can generate a concept of death that is far more sensible.

In an attempt to provide a more constructive account of this view, Chiong lists a series of organic functions that he believes to be not necessary or sufficient but rather 'contribute' to the organism's functional existence (2005, 25). The list includes but is not limited to consciousness, the ability to resist decay, the ability to absorb nutrients, spontaneous and internally regulated functionality, and ability to respond to external stimuli (Chiong 2005, 25). Instead of making the claim that any *one* of these is necessary and sufficient on its own, we should take them to be inseparable and, in fact, interdependent on each other for human life or life in general. In short, this view takes life and death to be a cluster of properties existing in a type of homeostatic disposition¹⁰⁹.

One way to understand this notion of a cluster can be taken from Wittgenstein's use of the term family resemblance. This term is meant to more aptly describe the similarities that run across his discussion of different games without presupposing that some particular thing runs the same through all of them (Wittgenstein 1958, 67). The concept of the game is not precise but rather vague or blurry, in the same way, that persons vary visually from sibling to sibling. It is something that does not adhere to fixed boundaries and on this point. Wittgenstein writes: "Is a photograph that is not sharp a picture of a person at all? Is it even always an advantage to replace a picture that is not sharp by one that is? Isn't one that isn't sharp often just what we need?" (1958, 71). His point in this passage appears to be drawing on a similar point to this discussion. Often a precise definition of something cannot be given, rather only a vague concept of what is allotted to us by the content of our environment and this is often more than enough. In his paper, "Homeostasis, Species and Higher Taxa", Richard Boyd suggested that even things such as natural kinds do

⁹ I am aware that there also exists some debate on the nature of Kripke's and Putnam's positions in relation to descriptivism and essentialism. These arguments were chosen simply to show that at a bare minimum the basic account of descriptivism is unsatisfactory. Whatever is included in these more refined takes on these philosophers is beyond the scope of this essay.

¹⁰ There do exist arguments that even species do not adhere to the standards of necessary and sufficient conditions but rather exist as individuals who are extended through space and time. To be clear, this is not the position being taken in this paper. See D.L. Hull, "A Matter of Individuality," for more on this subject.

appear as property clusters (1999, 143-144). They, like family resemblances, allow for things to be grouped or tied to the same kind through groupings of similar relevant properties but not one thing in particular. Determining the difference between life and death then becomes a matter of locating the property clusters pertinent to the maintenance of organic life.

Chiong advances Boyd's position by asserting that certain properties of the clusters are more important or central to the concept of death. Primarily, he takes both consciousness and spontaneous internal regulation to be central for membership in a life kind cluster, since they are the most prevalent in death determining cases (Chiong 2005, 26). We might nevertheless be concerned that holding certain properties as central might exclude and thereby make irrelevant all other properties of a given cluster. Take for example the notorious virus, and how it is under constant scrutiny about its status as a living thing. While viruses do contain one of Chiong's suggested properties namely, reproductive ability, it is not clear that this is sufficient for the cluster kind that is life (2005, 26). To take a line from Boyd, "...there will be many cases of extensional indeterminacy, which are not resolvable... There will be things that display some but not all of the properties in F... such that no rational considerations dictate whether or not they are to be classed under t, assuming that a dichotomous choice is to be made." (1999, 144). In short, there will be cases where some things, while having a few properties, will not have enough to strictly justify their status as members or non-members. The virus, therefore, becomes an indeterminate rather than determinate case of membership. So it is not that the property of reproduction is redundant but rather that it is insufficient on its own. If a virus were to have other properties such as the ability to absorb nutrients, then its status as indeterminate might be subject to change.

On the flipside, Chiong posits that having any one property that is central to a cluster satisfies membership into the natural kind (2005, 26). While this appears to be a reasonable claim to make in order to achieve determinacy, it is not without a potential problem. If we reconsider the position of the virus as an indeterminate member, then we know that a single non-central property is not sufficient for membership of that kind. However, if it were also true that any number of conjoined non-central properties always fails to qualify as a member of that kind, then, once again, the non-central properties would be deemed redundant. Moreover, such a restriction on non-central properties would reduce the theory to the classical definition, which is exactly what this paper seeks to avoid.

With the concepts of determinacy and indeterminacy in mind, returning to the status of Shewmon's meta-analysis yields interesting results. In particular, Chiong claims, that unlike cases of permanent vegetation, Shewmon's patients lacked far too many properties of the cluster and therefore exist in an indeterminate state (2005, 27). Since the persons are indeterminately alive rather than actually alive, these cases do not act as pure examples of the dead returning to life. Moreover, some of the properties that are present are not being maintained by the person themselves but through external assistance. To put it succinctly, the inclusion of externally provided properties only serves to dramatically narrow the scope of what can be considered dead and conversely widen the scope of what is alive. While this is not necessarily problematic, further considerations must be made in order to claim a similar kind of determinacy in relation to external processes interacting with persons. In the case that some of these externalities appear indeterminate, they could not be rightly applied further to case determining members of the living kind cluster.

If the previous paragraph holds, and Shewmon's analysis is discounted as a counter-example, then of our original three medical criteria only the notion of whole-brain death remains. However, to drive the point further, this is not a defense of the whole-brain criterion specifically. Rather the whole brain criterion, insofar as our list of properties does not dramatically change, allows for sufficient identification of members of the living and nonliving kinds. Chiong suggests that this criterion can be set as a foundation in which other

admissible cutoffs can be determined through the addition or removal of properties including those such as hormonal regulation (2005 27). This kind of approach leaves the concept of death open to a minor level of ambiguity in which the parameters can be adjusted, while also providing enough precision, in the case of human death, to inspire legitimate medical procedures. Perhaps a more fitting name, one that would prevent some unnecessary confusion, would be homeostatic death: a conception of death that keeps life's complexity at the fore and one that does not hold any of the admissible cutoffs as superior. This view of death directly compliments Wittgenstein's discussion of the fuzzy picture. While, over time, our precision may increase and the list of properties becomes more certain, so too does the quality and clarity of our picture. Nevertheless, the picture, as blurry as it may be, is exactly what we need.

Conclusion

The traditional and often intuitive response to the question of what makes something uniquely its own, whether that be individual or category has been both explored and criticized in this essay. As the developments in the philosophy of language show, many of the everyday concepts that we make use of are not as clear or certain as we make them out to be. Life and death, two terms already surrounded by vigorous debates in medicine and philosophy, perhaps lay claim to the title of the most obscure terms our world has to offer. It would be disingenuous therefore to define them in such a way that does not make this uncertainty apparent. I take this essay to show one way in which it is possible to redefine, if I should even call it that, death that holds this sense of fuzziness in high regard. It should be noted that further discussion involving the refinement of some of the concepts used here, especially the list of life essential properties, is warranted.

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Illness as Epoché

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Illness is a disruptive, painful, frightening experience. It causes upheaval and shakes one's being to the core, demanding an immediate response from the ill person and those around her. It is a powerful way to reveal the limits of embodied experience, considering the extraordinary bodily experiences that illness affords us, for example when undergoing major surgery, suffering a stroke, and of course when dying (Carel 2016, 2018). These experiences may bring the ill person to the limit of human existence and are "limit cases"; such experiences often exceed our capacities to make sense of them. These kinds of cases and other experiences of extreme and unusual embodiment shed light on normal experience, putting it in a new perspective and opening new horizons of bodily experiences as we know them. Illness can illuminate normal experience because it both extends it and contrasts with it. Illness is therefore philosophically enriching and a worthwhile topic for philosophical study. It is also, as I suggest here, a philosophical method in its own right: using insights from the phenomenology of illness, we can use illness to philosophize in ways that reveal important aspects of our embodied existence.

In what way can we think of illness as a philosophical method? I suggest that illness is, in important respects, like Husserl's epoché. The two share important features: They both distance a person from habitual ways of being; they both offer open, non-prescriptive ways of experiencing; and they both present an alternative to a set of metaphysical assumptions we tacitly make about the world (Carel 2021). Studying illness illuminates not only novel experiences (of disease, disability, existential confrontation with death), but also normal function and the tacit background that underpins it. The study of embodiment can be greatly enhanced, and indeed would be incomplete, without examining bodily breakdown and what I term "bodily doubt": how our tacit trust in the body is undermined by experiences of bodily failure (Carel 2013). Thus, in these two ways—the distancing that illness causes from everyday routines and the habitual body, and the insights we may glean from illness experiences—illness offers a philosophical method proper.

Illness is an existential change of such magnitude that it amounts to a kind of epoché, or bracketing, putting in abeyance our former beliefs about the nature of reality. The reflective process triggered by illness can also be thought of as a form of phenomenological reduction. The reduction is core to phenomenological practice and involves moving our attention from objects to acts of perception, focusing on the acts, their meaning, modes of operation, and how we experience them. Importantly, the reduction does not involve ceasing to perceive, nor is it a skeptical stance (Zahavi 2003). Rather, it is a shift in a way of being that suspends our natural attitude towards perception and the world and enables philosophical reflection. The reduction calls on us to suspend our underlying metaphysical beliefs, in favor of a neutralization of belief in the existence of the world or of a particular object. The reduction brackets our realist assumptions to enable withdrawal from an ordinarily implicit commitment to the reality of the world. As Zahavi notes, the reduction's role is not to "deny, doubt, neglect, abandon, or exclude reality from our research, but simply to suspend or neutralize a certain dogmatic attitude toward reality [...]" (ibid., p.45).

In the reduction, under-theorized aspects of experience become an object of inquiry, because we shift our attention from a given object to the way in which it is given and its modes of appearance to us. For Husserl, this procedure enables us to bracket the natural attitude, and thus to set aside, or suspend, taken-for-granted, meaning-laden, metaphysically determined ways of experiencing (ibid.). Phenomenology is

committed to making explicit aspects of experience that are overlooked by other approaches and may be poorly understood. An adequate approach to the experience of illness requires such a phenomenological reduction: a suspension of a natural attitude of implicitly accepting the background sense of belonging to a world and various interpretive dogmas along with it. Bracketing the natural attitude is a withdrawal from the ordinarily implicit commitment to the reality of the world, which allows us to see the world as a phenomenon of being, instead of something that is (Ratcliffe 2008, p. 4).

To reflect in this way, one needs to dislodge everyday habits and familiar modes of experience. Again, this is not a removal from the world but a shift to a way of being in the world that enables reflection/reflection. The shift moves us from the natural to the critical attitude, in which one can examine their relationship to the world in acts of perception. As Husserl writes, this “inhibiting” or “putting out of play” of the natural attitude exposes “my pure living [...] the universe of phenomena” (Husserl 1960, p. 20). Zahavi characterizes the reduction as an “entry gate” to reflection (Zahavi 2003; cf. Carel 2014). I suggest that both the reduction and illness are such an entry gate to reflection.

There are several ways of thinking about the relationship between the epoché and illness. We should consider disability, as well as illness. We also need to distinguish congenital from acquired disability. There may be considerable overlap between the different categories, so it is worth stating that I use the term illness to denote a serious health condition that is usually chronic and irreversible. This may be caused by disease but may also be caused by trauma, e.g. an accident. The irreversibility is important, as full recovery enables a return to the natural attitude, whilst remaining ill requires developing an alternative attitude, as a return to the pre-reflective attitude is impossible.

Illness, like the epoché, strips away shared meanings, and in doing that sheds new light on ordinarily tacit aspects of existence. Illness can be a life crisis, especially if the diagnosis or symptom appearance are sudden. It is characterized by disruption, tearing away from the everyday, and can amount to a collapse of the ill person’s narrative and life meaning. This collapse can initiate deep anxiety, which Heidegger characterizes as a loss of meaning in which possibilities for action become leveled as they lose their salience and make one unable to choose between them (Carel 2016). One can then fall into a state of paralysis, unable to act, because unable to choose a course of action, as all options have been leveled. In this state action is paralyzed but existence is experienced at its most acute, as Heidegger describes in *Being and Time* (Heidegger 1962; cf. Blattner 1994). Illness can operate similarly to Heidegger’s state of anxiety, paralyzing the structures and habits of everyday life that scaffold one’s actions.

Both Husserl’s epoché and Heideggerian anxiety are stances in which extraordinary experiences give rise to reflection. I suggest that the illness, the epoché, and anxiety are all reflective, or even hyper-reflective, forms of engagement with the world: the scrutiny of one’s life and habits and of the world as a whole and of meaning are fundamental to them. The case of illness is particularly powerful because reflection is a demand placed upon the ill person, who is compelled to re-examine and change her life, not only practically but existentially. Illness is a violent event, an encounter which destabilizes the structures of experience. Illness reveals our being by pushing it to its limits, to finitude, dis-ability, and alienation which are extreme modes of being. Illness may be even more radical than the epoché because it is imposed upon the ill person with no invitation, often little preparation, and little to protect oneself from its impact.

Illness deepens our understanding of embodied living by illuminating normal patterns of motility, comportment, and spatiality through their aberration. Merleau-Ponty uses this methodology when he examines pathological cases, such as phantom limb, anosognosia, and aphasia, to illuminate normalcy as full and spontaneous engagement with the world (Merleau-Ponty 2012, pp. 109, 137). This methodology has been criticized as creating a false dichotomy between normalcy and pathology and as conflating natural and

normal function (Dorfman 2005). However, illness raises philosophical questions about embodied existence, the mind–body relationship, value and meaning of life, death and finitude, and human vulnerability. As a juncture of such central philosophical issues, it merits systematic philosophical exploration not just of these issues and themes, but also of its process, structure and edifying capacity (Kidd 2012).

As a philosophical method, illness is unique; it is a violent disruption of lived experience, not an academic, studied phenomenological reduction. As such it is phenomenology in action. Illness sheds light on normal embodiment by contrasting it with taken-for-granted perceptual and motor processes and modes of being. This accords such states a productive epistemic role in, for example, phenomenology, philosophy of perception, epistemology and philosophy of action; a role that has been largely overlooked so far. The reliance of much philosophical argument on normal embodiment - which is a common tacit assumption in many contemporary discussions - can lead to a narrowing of possibilities of thought and a restricted consideration of what human life is and can be. Looking to expand this menu is an important task, one that only now is beginning to be undertaken¹.

Illness and cases of pathology, e.g. neuropathology, demonstrate to us that normal perception is not something taken for granted but an achievement. Merleau-Ponty's well-known analysis of Schneider, for example, illustrates that. Merleau-Ponty characterizes Schneider's malaise as existential, as modifying his entire existence. "[Schneider] is 'bound' to the actual, and he 'lacks freedom,' he lacks the concrete freedom that consists in the general power of placing oneself in a situation" (Merleau-Ponty 2012, p. 137). Merleau-Ponty uses Schneider's peculiar pathology to reveal how our bodies are "the power for a certain world" (ibid., p. 109). The normal person, Merleau-Ponty says, "reckons with the possible," which thus acquires a certain actuality (ibid., p. 112). In pathological cases the field of actuality is limited—much of what was possible is now off-limits. What was effortless and taken for granted is now a conscious, explicit effort; it is this effort and the correlating achievement of action that make pathological cases illuminating, because this effort illuminates for the first time taken for granted ways of being (Gallagher 2005). By making explicit what normally goes unnoticed, such cases draw our attention to how things normally are.

Merleau-Ponty's interpretation of Schneider's case can be formulated in a more general form as the breakdown of the intentional arc:

[...] the life of consciousness – epistemic life, the life of desire, or perceptual life – is underpinned by an "intentional arc" that projects around us our past, our future, our human milieu, our physical situation, our ideological situation, and our moral situation [...]. This intentional arc creates the unity of the senses, the unity of the senses with intelligence, and the unity of sensitivity and motricity. And this is what "goes limp" in the disorder (Merleau-Ponty 2012, p. 137).

This breakdown of normal human existence, which can happen in a vast range of somatic and mental disorders, merits philosophical study in its own right (Carel 2016). But it also provides a unique opportunity to reveal facets of normal existence that are usually invisible. Pathological cases can make explicit the intricate life of embodied consciousness which gives rise to everyday experience.

To conclude: I suggest that the study of illness, whether of body or of mind, can form the basis of a phenomenological method. This is for several reasons. First, illness is a "limit case," revealing the full spectrum of human experience. Second, illness often gives rise to reflection on finitude, dis-ability, suffering, injustice, and other existential themes. It tests conventional views, as well as norms and habits that have pre-reflectively guided us. Third, illness distances the ill person from previous bodily and life habits and their

¹ See, for example, Barnes (2016) bringing the minority body into philosophical mainstream; Stone's (2019) attention to natality; Leder's focus on the distressed body (2016); and Slatman's (2014) *Our Strange Body*.

accompanying tacit assumptions. And fourth, illness generates phenomenological insights not otherwise available. In light of this, I claim that illness amounts to an entry gate into philosophical reflection and offers a phenomenological method in its own right.

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