### 1

#### The desire to fill the insatiable lack creates experiences of impairment that structures the disability drive – cementing an order of signification that relies upon ableist value systems.

Mollow 15 [The Disability Drive by Anna Mollow A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy in English in the Graduate Division of the University of California, Berkeley Committee in charge: Professor Kent Puckett, Chair Professor Celeste G. Langan Professor Melinda Y. Chen Spring 2015. Anna Mollow received her Ph.D. in 2015 from the University of California, Berkeley, where she was an Andrew Vincent White and Florence Wales White Scholar and a UC Dissertation-Year Fellow. She is the coeditor, with Robert McRuer, of Sex and Disability (Duke UP, 2012) and the coeditor, with Merri Lisa Johnson, of DSM-CRIP (Social Text Online, 2013). Anna has published numerous articles on disability, queerness, feminism, race, and fatness. Her essays have appeared, or are forthcoming, in African American Review, Body Politics: Zeitschrift für Körpergeschichte, Hypatia: Journal of Feminist Philosophy, The Journal of Literary and Cultural Disability Studies, WSQ: Women’s Studies Quarterly, MELUS: Multi-Ethnic Literature of the United States, The Disability Studies Reader, Michigan Quarterly Review, the Wiley-Blackwell Companion to Critical and Cultural Theory, Disability Studies Quarterly, Bitch: Feminist Response to Pop Culture, Autostraddle, Everyday Feminism, and Huffington Post. // WHSRS and Lex VM]

Tropes of disability are also present in what Edelman reads as Jean Baudrillard‟s “panicky offensive against reproduction without heterogenital copulation,” in which sex is described as devolving into a “useless function” and humans are distinguished (unsuccessfully, Edelman argues) from “the order of the virus” (qtd. in Edelman 64, 62).111 Edelman‟s apt reading of these remarks by Baudrillard in relation to what was once called “the gay plague,” as well as his own plays on the word “bent,” suggest that it can be difficult, in homophobic and ableist culture, to distinguish between queerness and disability (62, 90).112 Anti-queer religious leaders, Edelman notes, characterize queer sexualities as “unhealthy” and “ugly,” and “ministries of hope” offer cures to those who have “grown sick-to-death of being queer” (91, 47). 113 Against the “pathology” or “social disease” as which queerness is diagnosed, queer-baiting of children, Edelman argues, functions as a form of “antigay immunization,” while the narrative of A Christmas Carol serves as an annual “booster shot” (143, 19, 49). These repetitive references to disability suggest that not only queerness but also disability might be a fitting name for what Edelman, alluding to the death drive, calls “the remainder of the Real internal to the Symbolic order” (25). Indeed, disability metaphors are often the closest approximations that Edelman can find for the “unnameable” death drive (25). The terms that Edelman uses to describe the death drive include “wound,” “fracture,” “stupid enjoyment,” “mindless violence,” “lifeless machinery,” “senseless compulsion,” “disfiguration,” and a “shutdown of life‟s vital machinery” (No Future 22; “Kid” 28; No Future 38, 23, 27, 38, 37, 44). Although these signifiers do not directly refer to specific impairments, they do, taken together, evoke the physical and mental injury and dysfunction as which disability is commonly understood. And then there is Edelman‟s term “sinthomosexuality,” a neologism formed by “grafting, at an awkward join,” the word “sexuality” onto Lacan‟s term “sinthome.” With its “awkward” “grafting,” the word “sinthomosexuality” embodies disability at the level of the letter.114 Etymologically, too, Edelman‟s term harkens back to disability: “sinthome” is an archaic way of spelling the French word for “symptom” (qtd. in Edelman 33). The root meaning of “sinthomosexuality,” then, is something like “symptom-sexuality.” However, Lacan‟s “sinthome” means more than simply “symptom”: it refers, Edelman explains, to “the particular way each subject manages to knot together the orders of the Symbolic, the Imaginary, and the Real” (35). The sinthome is the only means by which the subject can access the Symbolic order of meaning production; but paradoxically, because each subject‟s sinthome is arbitrary and meaningless (as individual as a fingerprint), the sinthome also threatens the Symbolic order to which it provides access (36). Both this access and this threat are figured as disability. In order to be constituted as a subject and to take one‟s place within the Symbolic order, one must be metaphorically blind: the cost of subjectivity is “blindness to this determination by the sinthome,” “blindness to the arbitrary fixation of enjoyment responsible for [the subject‟s] consistency,” “blindness” to the functioning of the sinthome (Edelman 36, 38). The alternative to subjectivity as disability would be, according to remarks that Edelman attributes to Lacan, “radical psychotic autism” (qtd. in Edelman 37).115 That is, whatever might alleviate our constitutive “blindness” by exposing “the sinthome as meaningless knot” must effect a “disfiguration” (Edelman 38), the consequences of which would be “pure autism” (Žižek 81, qtd. in Edelman 38). On the one side, blindness; on the other, disfiguration, psychosis, autism: when it comes to recognizing the senselessness of one‟s sinthome, it seems we‟re disabled if we do, disabled if we don‟t. This is why I have proposed that the “death drive”—a force that has less to do with literal death than with a strange persistence of life in death, or of death in life (perhaps like the “life not worth living” of which disability is often supposed to consist)—would more accurately be termed the “disability drive.” Writing of the contingency of disability as an identity category, Michael Bérubé observes: Any of us who identify as “nondisabled” must know that our self-designation is inevitably temporary, and that a car crash, a virus, a degenerative genetic disease, or a precedent-setting legal decision could change our status in ways over which we have no control whatsoever. If it is obvious why most nondisabled people resist this line of thinking, it should be equally obvious why that resistance must somehow be overcome. (viii) Could part of this resistance be attributable to a fear that, in the car crash or other identity- shattering event, it might be the driver‟s own hand that makes that disabling turn, that is, that the driver might be driven by an impulse, unwanted and unconscious, toward something beyond the principles of pleasure and health? Applying the name “the disability drive” to this “beyond” affords insight into the reasons that images of disability so powerfully excite and repel, becoming, as Tobin Siebers writes, “sources of fear and fascination for able-bodied people, who cannot bear to look at the unruly sight before them but also cannot bear not to look” (178). Later in this chapter, I will define the affect that Siebers references here as “primary pity.” For now, though, I simply want to point out that Siebers‟s important observation can be extended by noting that it is not only nondisabled people who react to images of disability with a mixture of aversion and attraction. Disabled people may also respond in this way, especially when contemplating impairments other than those that currently disable us.116 Building on Douglas Baynton‟s famous assertion that “disability is everywhere,...once you begin looking for it,” I suggest that the same may be true in regard to the disability drive: this ego-undoing psychic force shapes the subjectivities of disabled and nondisabled subjects alike (52). Manifestations of the disability drive may be present in Edelman‟s discussion of Tiny Tim. Take, for example, Edelman‟s contention that “the pleasurable fantasy of survival” in Dickens‟s story requires the survival of the fantasy that Tiny Tim “does not excite an ardent fear (or is it a fearful ardor?) to see him . . . at last cash in his chips” (45). It‟s a familiar cultural fantasy: cure ‟em (as Dickens might hope) or kill ‟em (as Edelman suggests readers must secretly wish).117 But in this unacknowledged wish, there may be more at stake than either killing or curing. In the chapter that follows his reading of A Christmas Carol, Edelman adduces Lacan‟s discussion of the legend of Saint Martin, who was said to have cut his own cloak in two in order to give half of it to a beggar. “Perhaps,” Lacan suggests, “over and above that need to be clothed, [the beggar] was begging for something else, namely that Saint Martin either kill him or fuck him” (qtd. in Edelman 83). Drawing upon this passage in his analysis of North by 72 Northwest, Edelman proposes that as Leonard attempts to push Roger Thornhill to his death from atop Mount Rushmore, he “enacts . . . the one [killing] as displacement of the other [fucking]” (85). Killing as displacement of fucking: might a similar displacement be at work in Edelman‟s attribution, to Dickens‟s readers, of a “fearful ardor” to see Tiny Tim “at last cash in his chips” (45)? As evidence for this suggestion, take the mode by which Edelman introduces his discussion of A Christmas Carol: “Take Tiny Tim, please!,” “with a nod to the spirit of the late Henny Youngman” renders Tiny Tim wifelike—clearly undesirable in this context, but not wholly uneroticized (41). And then there is the word “take,” which, particularly when followed by the word “please,” has a meaning other than the ones Edelman seems deliberately to invoke: “take” means “fuck,” and so Edelman‟s directive to “take Tiny Tim, please!,” which echoes his earlier injunction to “fuck Annie; fuck the waif from Les Mis; fuck the poor, innocent kid on the Net,” seems to authorize an additional imperative: fuck Tiny Tim. “Fuck” here means, of course, “remove” or “the hell with,” but it also means fuck.118 Arguably, these two ways in which No Future says “fuck Tiny Tim” coincide with what disability studies most ardently desires. “Fuck Tiny Tim, please!” disability scholars beg: rid us, please, of this most reviled textual creation. And also: if it is our cultural mandate to embody this pitiable, platitude-issuing, infantilized, and irritating figure—well, then fuck us, every one. Fuck us because figuratively, we are already “so fucked” by our culture‟s insistence, through this figure, that the disabled are not fuckable. This insistence must be understood as a form of reactive reinforcement: propelling every cultural representation of disability as undesirable, there may be a “fearful ardor,” an unacknowledged drive. Such representations include Edelman‟s abjection of Tiny Tim. And, I will argue, they also pertain to a similar abjection of Tiny Tim in the field of disability studies. As we shall soon see, the drive that infuses affective reactions to disability with ardor is often expressed through the emotion of pity. In taking account of the various forms that pity can take, we will be led to pose a question to disability studies and to queer antisocial theory together: are we sure that we want to take Tiny Tim out of the cultural text? A Tale of Two Pities “Piss on pity,” declares a well-known disability activist bumper sticker. A more polite companion to this tag, the slogan “No pity” is a rallying cry of the disability rights movement.119 For disability studies, a field that since its inception has vigorously resisted the imposition of pity upon disabled people, Tiny Tim is anathema. Understandably so: every year, the image of Tiny Tim is used to drum up pity for disabled people; the widespread circulation of this affect, disability scholars have compellingly argued, does not alleviate the social barriers that we face but instead reinforces our oppression. Indispensable as this disability studies analysis is, it leaves some important questions about pity unanswered. For example: if, as is commonly said, “No one wants to be pitied,” then why is this so? And also, if nobody wants to be pitied, who, if anyone, wants to feel pity? At first glance, the answer to the latter question might seem to be “everyone.” Certainly, multitudes of moviegoers appear to enjoy our culture‟s annual recitations of Tiny Tim‟s pity inducing tale. If it can be fun to perform pity, perhaps this is because pity gives a boost to the ego of the pitying person. “You are broken, and I am whole,” the pitier says to the one who is pitied. “I look down on you because you suffer.” Naturally, disabled people resist performing this service for the nondisabled. “Spare us your pity,” we say, because pity is felt to be demeaning. 73 Yet an incoherence structures this familiar account of pity: if pity fortifies the ego of the subject who feels it, then why do people so often resist feeling pity? Some folks get pissed when they are prodded to pity. “Your appeals to pity won‟t work,” they say. “I have no pity for you.” This is the attitude that Scrooge takes toward Tiny Tim. It‟s also the stance that Edelman invites queers to take in relation to the Child—and not only to the Child per se, but also to anyone who calls for a performance of pity. Edelman argues that compassion (which, of course, is a close relative of pity) is fundamentally narcissistic (73). When we call ourselves compassionate, we think we‟re feeling for the other; but, Edelman contends, we‟re really only feeling for ourselves (83). That is, compassion involves projecting one‟s own ego onto the object of one‟s compassion. In this schema, the pitied person is used as a vehicle for the pitier to feel sorry for his or her own self.

#### There is a two-tiered affective reaction when confronted with disability – primary pity damages the egos’ ability status, which invokes secondary pity to overcorrect for the threat.

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A great deal of the pain and pleasure of primary pity center on questions about what, or who, this fallen self is. When most people think about pity, we refer to an affect in which, to adopt Edelman‟s phrase, we purport to “feel for the other.” But as with primary narcissism, in which the self has not yet been constituted, and therefore cannot be said to enter into intersubjective relations with an “other,” primary pity entails a mixing up of self and other such that the ego, in becoming permeable to pain that may properly belong to “someone else,” is profoundly threatened in its integrity. Primary pity is that intense pain-pleasure complex that is provoked by the image of a suffering other who, it seems momentarily, both is and is not one‟s self. This affective response can feel unbearable, as seen in Siebers‟s formulation: one “cannot bear to look…but also cannot bear not to look.” Primary pity is difficult to bear because it involves a drive toward disability (one cannot bear not to look), which menaces the ego‟s investments in health, pleasure, and control—because to contemplate another person‟s suffering is to confront the question, “Could this happen to me?” Such a prospect, although frightening, may also be compelling; in this way, primary pity replicates the self-rupturing aspects of sexuality. Indeed, the unbearability of primary pity reflects its coextensiveness with sexuality. Sex, or the Unbearable, a book coauthored by Edelman and by Lauren Berlant, argues that sex “unleashes unbearable contradictions that we nonetheless struggle to bear” (back cover). This claim accords with Freud‟s account of sexuality as a “pleasurable” “unpleasure” that the ego can never fully master or control (Three 49,75). As Leo Bersani puts it in his reading of Freud, “the pleasurable unpleasurable tension of sexual enjoyment occurs when the body‟s „normal‟ range of sensation is exceeded, and when the organization of the self is momentarily disturbed”; thus, “sexuality would be that which is intolerable to the structured self” (Freudian 38). Primary pity is also intolerable to the structured self, because it entails a fascination with the fantasy of a self in a state of disintegration or disablement. Secondary pity is something else, although it cannot wholly be differentiated from primary pity. Secondary pity attempts to heal primary pity‟s self-rupturing effects by converting primary pity into a feeling that is bearable. As with secondary narcissism, secondary pity involves both an attempt to get back to that ego-shattering state of painfully pleasurable primary pity, and at the same time to defend against that threat to the ego by aggrandizing oneself at someone else‟s expense. Secondary pity refers to all those ego-bolstering behaviors that most people think of when they talk about pity. Disabled people are all too familiar with these behaviors: the saccharin sympathy, the telethon rituals of “conspicuous contribution,” the insistence that “they” (i.e., nondisabled people) could never endure such suffering. More commonly known in our culture simply as “pity,” secondary pity encompasses our culture‟s most clichéd reactions to disability: charity, tears, and calls for a cure. Correlatives of these commonplace manifestations of secondary pity are the obligatory claims that disabled people‟s suffering is “inspiring.” Indeed, the speed with which conventional cultural representations of disability segue from overt expressions of pity to celebrations of “the triumph of the human spirit” highlights the ways in which secondary pity, as a defense against primary pity‟s incursions, reinforces the ego‟s fantasy of sovereignty. Secondary pity, in other words, can be seen as a variation of secondary narcissism: these affects enlarge the ego of the pitier or the narcissist at the expense of someone else. But primary pity is not the same as either primary narcissism, secondary narcissism, or secondary pity. Unlike primary narcissism, a feeling that emerges out of a relation to the world in which notions of “self” and “other” do not obtain, primary pity does depend upon the constructs of self and other, although these constructions are unstable and are continually threatening to come undone. Primary pity can thus be envisioned as a threshold category occupying a liminal position between the total denial of the other that is inherent to primary narcissism and the rigid structure of (superior) self and (inferior) other that constitutes secondary narcissism and secondary pity. My concept of primary versus secondary pity also differs from Freud‟s primary secondary narcissism distinction at the level of genealogy. Like Freud‟s account of primary and secondary narcissisms, my model of primary and secondary pities involves a temporal transition; but whereas Freud imagines the movement from primary to secondary narcissism as a passage from an earlier to a later stage of an individual‟s development, the temporal shift from primary to secondary pity happens much more quickly than this. It happens in an instant: that moment in which we feel primary pity and then, almost before we can blink, deny that we feel or have felt it. The denial is understandable: who wants to admit that one gets pleasure from the sight of another person‟s suffering—or, to make matters worse, that this pleasure derives in part from the specter of disability‟s transferability, the possibility that this suffering could be—and, fantasmatically, perhaps already is—an image of one‟s own self undone?

#### The 1ACs belief of a better future is tied to rehabilitation where the signifier of the Child is placed forward to demean disabled people.

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Elsewhere, I have argued that No Future‟s impassioned polemic is one that disability studies might take to heart. Indeed, the figure that Edelman calls “the disciplinary image of the ‘innocent’ Child” is inextricable not only from queerness but also from disability (19). For example, the Child is the centerpiece of the telethon, a ritual display of pity that demeans disabled people. When Jerry Lewis counters disability activists‟ objections to his assertion that a disabled person is “half a person,” he insists that he is only fighting for the Children: “Please, I’m begging for survival. I want my kids alive,” he implores (in Johnson, Too Late 53, 58). If the Child makes an excellent alibi for ableism, perhaps this is because, as Edelman points out, the idea of not fighting for this figure is unthinkable. Thus, when Harriet McBryde Johnson hands out leaflets protesting the Muscular Dystrophy Association, a confused passerby cannot make sense of what her protest is about. “You‟re against Jerry Lewis!” he exclaims (61). The passerby’s surprise is likely informed by a logic similar to that which, in Edelman‟s analysis, undergirds the use of the word “choice” by advocates of legal abortion: “Who would, after all, come out for abortion or stand against reproduction, against futurity, and so against life?” (16). Similarly, why would anyone come out for disability, and so against the Child who, without a cure, might never walk, might never lead a normal life, might not even have a future at all? The logic of the telethon, in other words, relies on an ideology that might be defined as “rehabilitative futurism,” a term that I coin to overlap and intersect with Edelman‟s notion of “reproductive futurism.” If, as Edelman maintains, the future is envisaged in terms of a fantasmatic “Child,” then the survival of this future-figured-as-Child is threatened by both queerness and disability. Futurity is habitually imagined in terms that fantasize the eradication of disability: a recovery of a “crippled” or “hobbled” economy, a cure for society’s ills, an end to suffering and disease. Eugenic ideologies are also grounded in both reproductive and rehabilitative futurism: procreation by the fit and elimination of the disabled, eugenicists promised, would bring forth a better future.” (68-69)

#### The alternative is to analyze the disability drive shattering the fantasy of the ego. Anything else just displaces the lack onto other oppressed groups – condo.

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Questions about activism press us further, too. In using the lenses of psychoanalysis and literary theory to delineate aspects of the cultural politics of disability, I have not laid out a guideline or program for resisting ableist social structures. I have sought instead to show how developing an understanding of the disability drive—and, in particular, attending to the violences that result from individuals‟ and cultures‟ misrecognitions of the drive—may facilitate transformations in how we conceive of our subjectivities. Such transformations, deeply indebted to the feminist maxim that the personal is political, are not individual solutions akin to the overcoming narrative. Rather, by changing how we understand our “insides,” we may contribute to changing the ways that, “outside,” on the level of the social, we relate to each other. As we saw in Chapter 4, something as seemingly personal as an individual‟s “relationship to food” can raise vexing questions that, when we deny that within ourselves that drives these questions, become the basis of damaging social structures of fatphobia, racism, classism, misogyny, and anti-queer prejudice. If the drive won‟t stop doing us, is it possible that we can allow it to do us differently? In the last paragraph of this dissertation, on the day that it is due, I feel as if I should leave you with a message to take home: perhaps a user‟s guide to the drive, a method for learning to love this thing that won‟t leave us. If I were a queer antisocial theorist, I might propose that we shout out, loud and proud, something like this: “We‟re here! We‟re queer! We are the drive! And you‟ll never get used to us!” But such a call, we saw in Chapter 1, performs a fantasy of overcoming the drive by identifying with it (if you can‟t beat it, join it); and the drive is not a force that can be overcome. Were I to articulate my own version of a saying evoking the feeling of the drive, it would go more like this: “Come on; we‟re late; let‟s go—oh no, where are my keys!?” To be clear, I am the last person who should offer advice about handling the loss of one‟s keys. I know the recommendations—stay calm; breathe; retrace your steps—but rarely do I heed them. For me, it‟s closer to: Panic! Berate self! Look for someone to blame! I have no guide for getting over this set of reactions, but I do want to say this: “The Disability Drive” has been an invitation to think collectively about the ways that, when we feel we cannot bear the psychic or social equivalents of losing our keys (keys potentially serving as metaphors for other objects, the loss of which might be more devastating), the impetus to blame someone else can harden into a fixed idea, a truth that one refuses to relinquish. We have analyzed multiple examples of this process: fat people stigmatized as “compulsive eaters,” feminists caricatured as anti-sex identitarians, and chronically ill people dismissed as “hysterical.” If this dissertation has a moral, it is this: the intolerable feeling that arises when we lose keys, control, or other objects that we think we need in order to believe in our selves, originates not from outside us but from within. This is the drive: it always has its keys in hand. We are not done with the drive.

### AT Underview

#### We get new 2nr responses to 1AC spikes or theory arguments - [A] Ableism – blippy 1ac analytics means we will always miss something since we have adhd and concentrating is hard [B] spikes are underdeveloped and don’t have an implication till the 1ar.

### Framework

#### The role of the ballot is to vote for the methodology that best engages in epistemological disablement.

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“How, then, might we begin to acknowledge our own determination by the drive? Any knowing of the drive that we might hope to achieve must, on account of the structural barriers that render the drive unthinkable, be an effort characterized by failure and incompletion—that is, we might say, by epistemological disablement. The term “epistemological disablement” will appear frequently in this dissertation, as I will argue that coming into close proximity with the disability drive produces states of cognitive and affective uncertainty, confusion, and incapacity that are akin to disability. In the works that I shall analyze, epistemological disablement will often be performed on a textual level, as theorists and narrators seem to lose control of what they want to say about disability. These moments of epistemological disablement are often disavowed by theorists and narrators and are instead projected onto disabled people. When this happens, disabled people’s impairments are depicted as the result of an insufficiency of self-knowledge that is assumed not to determine nondisabled subjects. I will challenge these characterizations of disabled people not only by arguing for the value of “cripistemologies” (that is, ways of knowing that arise from disabled people‟s lived experiences) but also by using drive theory to undermine belief in the possibility of a transparent and wholly knowable self, whether disabled or nondisabled.18 My two-pronged approach to the issue of epistemological disablement may seem to present a paradox: on the one hand, I am asserting that disabled people’s lived experiences generate important knowledge about disability; yet at the same time I am seeking to destabilize the very notion of self-knowledge. Let me be clear, then, that in undertaking this double endeavor I do not forward all-or-nothing claims either “for” or “against” the possibilities of self- knowledge. I will not assert that people cannot ever know anything reliable about themselves, but I will also not suggest that truth claims derived from personal knowledge about disability are infallible. Instead, this dissertation highlights the limits of complete self-knowledge for nondisabled and disabled subjects alike, while at the same time interrogating the social dynamics that give rise to imbalances in the distribution of epistemological authority to particular subjects on the basis of their perceived status as disabled or nondisabled.” (4)

### Case

#### Extinction is good---suffering outweighs the benefits of human existence

Joshua Rothman 17 {Joshua Rothman, the ideas editor of the New Yorker citing David Benatar, Associate Professor of Philosophy at University of Cape Town and author of Better To Never Have Been. 11-27-2017. “The Case for Not Being Born.” https://www.newyorker.com/culture/persons-of-interest/the-case-for-not-being-born}//JM

People, in short, say that life is good. Benatar believes that they are mistaken. “The quality of human life is, contrary to what many people think, actually quite appalling,” he writes, in “The Human Predicament.” He provides an escalating list of woes, designed to prove that even the lives of happy people are worse than they think. We’re almost always hungry or thirsty, he writes; when we’re not, we must go to the bathroom. We often experience “thermal discomfort”—we are too hot or too cold—or are tired and unable to nap. We suffer from itches, allergies, and colds, menstrual pains or hot flashes. Life is a procession of “frustrations and irritations”—waiting in traffic, standing in line, filling out forms. Forced to work, we often find our jobs exhausting; even “those who enjoy their work may have professional aspirations that remain unfulfilled.” Many lonely people remain single, while those who marry fight and divorce. “People want to be, look, and feel younger, and yet they age relentlessly”:

They have high hopes for their children and these are often thwarted when, for example, the children prove to be a disappointment in some way or other. When those close to us suffer, we suffer at the sight of it. When they die, we are bereft.

The knee-jerk response to observations like these is, “If life is so bad, why don’t you just kill yourself?” Benatar devotes a forty-three-page chapter to proving that death only exacerbates our problems. “Life is bad, but so is death,” he concludes. “Of course, life is not bad in every way. Neither is death bad in every way. However, both life and death are, in crucial respects, awful. Together, they constitute an existential vise—the wretched grip that enforces our predicament.” It’s better, he argues, not to enter into the predicament in the first place. People sometimes ask themselves whether life is worth living. Benatar thinks that it’s better to ask sub-questions: Is life worth continuing? (Yes, because death is bad.) Is life worth starting? (No.)

Benatar is far from the only anti-natalist. Books such as Sarah Perry’s “Every Cradle Is a Grave” and Thomas Ligotti’s “The Conspiracy Against the Human Race” have also found audiences. There are many “misanthropic anti-natalists”: the Voluntary Human Extinction Movement, for example, has thousands of members who believe that, for environmental reasons, human beings should cease to exist. For misanthropic anti-natalists, the problem isn’t life—it’s us. Benatar, by contrast, is a “compassionate anti-natalist.” His thinking parallels that of the philosopher Thomas Metzinger, who studies consciousness and artificial intelligence; Metzinger espouses digital anti-natalism, arguing that it would be wrong to create artificially conscious computer programs because doing so would increase the amount of suffering in the world. The same argument could apply to human beings.

Like a boxer who has practiced his counters, Benatar has anticipated a range of objections. Many people suggest that the best experiences in life—love, beauty, discovery, and so on—make up for the bad ones. To this, Benatar replies that pain is worse than pleasure is good. Pain lasts longer: “There’s such a thing as chronic pain, but there’s no such thing as chronic pleasure,” he said. It’s also more powerful: would you trade five minutes of the worst pain imaginable for five minutes of the greatest pleasure? Moreover, there’s an abstract sense in which missing out on good experiences isn’t as bad as having bad ones. “For an existing person, the presence of bad things is bad and the presence of good things is good,” Benatar explained. “But compare that with a scenario in which that person never existed—then, the absence of the bad would be good, but the absence of the good wouldn’t be bad, because there’d be nobody to be deprived of those good things.” This asymmetry “completely stacks the deck against existence,” he continued, because it suggests that “all the unpleasantness and all the misery and all the suffering could be over, without any real cost.”

Some people argue that talk of pain and pleasure misses the point: even if life isn’t good, it’s meaningful. Benatar replies that, in fact, human life is cosmically meaningless: we exist in an indifferent universe, perhaps even a “multiverse,” and are subject to blind and purposeless natural forces. In the absence of cosmic meaning, only “terrestrial” meaning remains—and, he writes, there’s “something circular about arguing that the purpose of humanity’s existence is that individual humans should help one another.” Benatar also rejects the argument that struggle and suffering, in themselves, can lend meaning to existence. “I don’t believe that suffering gives meaning,” Benatar said. “I think that people try to find meaning in suffering because the suffering is otherwise so gratuitous and unbearable.” It’s true, he said, that “Nelson Mandela generated meaning through the way he responded to suffering—but that’s not to defend the conditions in which he lived.”

#### “Extinction” is a decision rule -- it solves future generations of nonhuman suffering.

Sittler-Adamczewski 16 Thomas M. Sittler-Adamczewski (University of Oxford). “Consistent Vegetarianism and the Suffering of Wild Animals.” Journal of Practical Ethics. OXFORD UEHIRO PRIZE IN PRACTICAL ETHICS 2015-16. December 2016. JDN. http://www.jpe.ox.ac.uk/papers/consistent-vegetarianism-and-the-suffering-of-wild-animals/

Ethical consequentialist vegetarians believe that farmed animals have lives that are worse than non-existence. In this paper, I sketch out an argument that wild animals have worse lives than farmed animals, and that consistent vegetarians should therefore reduce the number of wild animals as a top priority. I consider objections to the argument, and discuss which courses of action are open to those who accept the argument. Many consequentialists are vegetarian because they care about the harm done to farmed animals. Some consequentialists may be vegetarian because of environmental concerns, and others for non-consequentialist reasons, but these are not my main focus here. More precisely then, ethical consequentialist vegetarians believe that farmed animals have lives so bad they are not worth living, so that it is better for them not to come into existence. Vegetarians reduce the demand for meat, so that farmers will breed fewer animals, preventing the existence of additional animals. If ethical consequentialist vegetarians1 believed that animals have lives that are unpleasant but still better than non-existence, they would focus on reducing harm to these animals without reducing their numbers, for instance by supporting humane slaughter or buying meat from free-range cows. I will argue that if vegetarians were to apply this principle consistently, the suffering of wild animals would dominate their concerns, and would plausibly lead them to support reducing the number of wild animals, for instance through habitat destruction or sterilisation. SUFFERING IN NATURE, AND ITS IMPLICATIONS If animals like free-range cows have lives that are not worth living, almost all wild animals could plausibly be thought to also have lives that are worse than non-existence. Nature is often romanticised as a well-balanced idyll, so this may seem counter-intuitive. But extreme forms of suffering like starvation, dehydration, or being eaten alive by a predator are much more common in wild animals than farm animals. Crocodiles and hyenas disembowel their prey before killing them (Tomasik 2009). In birds, diseases like avian salmonellosis produce excruciating symptoms in the final days of life, such as depression, shivering, loss of appetite, and just before death, blindness, incoordination, staggering, tremor and convulsions (Michigan Department of Natural Resources). While a farmed animal like a free-range cow has to endure some confinement and a premature and potentially painful death (stunning sometimes fails), a wild animal may suffer comparable experiences, such as surviving a cold winter or having to fear predators, while additionally undergoing the aforementioned extreme suffering (Tomasik 2013). Wild animals do experience significant pleasure, for instance when they eat, play, have sex, or engage in other normal physical activity. One reason to suspect that on average this pleasure is outweighed by suffering is that most species use the reproductive strategy of r-selection, which means that the overwhelming majority of their offspring starve or are eaten shortly after birth and only very few reach reproductive age (Horta 2010; Ng 1995). For instance, ‘in her lifetime a lioness might have 20 cubs; a pigeon, 150 chicks; a mouse, 1000 kits’ (Hapgood 1979), the vast majority of which will die before they could have had many pleasurable experiences. Overall, it seems plausible that wild animals have worse lives than, say, free-range cows. If vegetarians think it’s better for the latter not to exist, they must believe the same thing about wild animals. A second important empirical fact is that wild animals far outnumber farmed animals. Using figures from the FAO, Tomasik estimates that the global livestock population is 24 billion (including 17 billion chicken) (Tomasik 2014). I restrict my count of wild animals to those at least as complex as chicken or small fish, which vegetarians clearly believe do have moral weight. Using studies of animal density in different biomes, Tomasik estimates conservatively that there are at least [60 Billion] 6\*10^10 land birds, [600 Billion] 10^11 land mammals, and [60 trillion] 10^13 fish. Animals in each of these categories alone are several times more numerous than livestock. If wild animals’ well-being is indeed below the threshold for a life worth living, and the above numbers are remotely correct, the scale of wild animal suffering is vast. As Richard Dawkins writes, ‘During the minute it takes me to compose this sentence, thousands of animals are being eaten alive; others are running for their lives, whimpering with fear; others are being slowly devoured from within by rasping parasites; thousands of all kinds are dying of starvation, thirst and disease.’ (Dawkins 1996) If they accept the premises so far, consistent vegetarians should focus on preventing the existence of as many wild animals as possible, since even a small reduction in the global number of wild animals would outweigh the impact of ending all livestock production. For example, they could reduce animal populations by sterilising them, or by destroying highly dense animal habitats such as rainforests. It may even be the case that vegetarians should react to this argument by eating more meat, since feeding livestock requires more surface area for agriculture, and fields contain far fewer wild animals per square kilometre than other biomes such as forests (Matheny and Chan 2005, 585). Of course, to the extent that it is more difficult to reduce wild animal populations than farm animal populations, vegetarians should focus more resources on the latter. But it seems implausible that it would be over a hundred times more difficult to achieve the same proportional reduction, which is what would be needed to reverse my conclusion that wild animal suffering dominates. There could be some simple ways, for instance, for vegetarians to reduce habitat sizes: supporting the construction of large parking lots, or donating to a pro-deforestation lobby. In the final paragraph, I touch upon the issue of how most effectively to reduce wild animal suffering.

#### Non-human suffering is the largest impact -- in quantity and severity – r-selection guarantees it

Moen 16 Ole Martin Moen (University of Oslo, Centre for the Study of Mind in Nature). “The ethics of wild animal suffering.” Etikk i praksis. Nord J Appl Ethics (2016), 91–104. JDN. <http://www.olemartinmoen.com/wp-content/uploads/TheEthicsofWildAnimalSuffering.pdf>

If you have an open wound, a fractured bone, or terminal cancer, you suffer. But how do wounds, bone fractures, and cancers feel for animals such as sparrows, rabbits, and bears? Theoretically, it is possible that it does not feel like anything at all, because animals might not be conscious. Perhaps animals are just complicated machines, more like clocks and cars than like humans. Though it is difficult to establish conclusively that animals really are conscious, however, it is also increasingly difficult to see why rejecting consciousness in animals is any more reasonable than rejecting consciousness in other human beings. Although solipsism at the species level might make sense within religious contexts where humans are taken to have originated separately from all other animals, it coheres well with neither neuroscience nor evolution. Comparing ourselves to sparrows, rabbits, and bears, we may observe that we have the same kind of neurons, the same main brain parts, and the same pain pathways (C and A delta fibers) that they have. Sparrows, rabbits, and bears, moreover, react to noxious stimuli the same way we do, and they stop doing so when anesthetized (see Griffin & Speck 2004; Dawkins 2015). Since we and other animals are genetically, neurologically, and functionally very close, we would need weighty evidence to conclude that, despite these similarities, humans work in fundamentally different ways from other animals: humans consciously, animals non-consciously.1 Increased understanding of animal consciousness helped spur the animal ethics movement. Keeping animals in small cages, castrating them without anesthetics, and branding them with glowing irons—practices that, if performed on humans, would land the perpetrator in prison for decades—are common farming practices around the world. Millions of farm animals live and die under such conditions. Opposing human disregard for animal welfare, Peter Singer (1990) famously argues that just as we have gradually expanded our circle of moral concern to encompass ethnic groups other than our own, and finally humanity as a whole, we should further expand it to include other sentient species. According to Singer, it is suffering as such that is bad, and it is bad whoever experiences it. Though the animal ethics movement is commendable, its circle of moral concern has hitherto expanded almost exclusively to captive animals. With very few exceptions—most notably, David Pearce and Jeff McMahan, whom I shall discuss in detail below—animal ethicists have failed to adequately take into account the suffering of animals living in the wild. Wild animals, however, vastly outnumber captive animals, and arguably, billions of wild animals live lives that are even more painful and distressing than those of their captive counterparts. Though it might well be difficult to alleviate suffering in the wild, and comparatively easier to alleviate suffering caused by humans, disregarding wild animal suffering from the outset involves a form of anthropocentrism that, sadly, enjoys wide acceptance even among those who purport to oppose the doctrine. We might dub this the second anthropocentrism. While traditional anthropocentrics are concerned only with human suffering, anthropocentrics of the second kind are concerned only with human-caused suffering. I will suggest, however, that if we take suffering as such to be bad (roughly along the lines that Singer does), it is unclear why the species membership of those who cause the suffering is morally relevant while the species membership of those who suffer is not. My aim in this paper is not to sway those who are indifferent to animal welfare. Rather, my aim is to make those who are concerned with animal welfare more concerned with the welfare of wild animals. Moreover, I shall exclusively discuss welfarist concerns, so if there are other grounds to care for animals, they lie beyond the scope of this paper. My discussion is limited to mammals and birds, the reason for which is that these are the animals whose ability to suffer is least disputed. If fish, amphibians, reptiles, and/or invertebrates can also suffer, my conclusion is amplified. The empirical side Let me start by defending three empirical claims: (1) that there are vastly more wild than captive animals; (2) that wild animals have the same capacity to suffer as captive animals; and (3) that many, perhaps most, wild animals suffer at least as much as their captive counterparts. These are all empirical claims that say nothing about the value significance of wild animal suffering. As such, we should accept or reject these claims irrespective of our ethical views. How many captive animals are there? According to the Food and Agriculture Organization of the United Nations (2014), the total number of livestock in the world is—at any given time—roughly 25 billion, the majority of which are chicken, followed by ducks, cattle, and sheep. Although this figure leaves out pets and laboratory animals, let us take for granted, for the sake of convenience, that the number of livestock is roughly representative of the number of captive animals. How many wild animals are there? According to Brian Tomasik’s (2014a) estimations, which are generated from research data on the typical prevalence of various animals in various environments coupled with data on the global prevalence of these environments, there are—at any given time—between 60 and 200 billion birds and between 100 and 1,000 billion mammals. If we assume the middle estimate for both birds and mammals, there are, at any given time, 700 billion wild birds and wild mammals combined. This is roughly 25 times the number of birds and mammals in captivity. (If we were to include in our estimates fish, amphibians, reptiles, and invertebrates, which are rare in human captivity but very prevalent in the wild, we would end up with thousands of times more wild than captive animals.) A further empirical premise is that wild animals have the same ability to suffer as captive animals. By this I simply mean that if you tear the skin of both a wild and a captive animal, there is no compelling reason to believe that this would hurt more for the captive animal than for the wild animal. In fact, if we were to conclude that there is a difference between the two, we should probably conclude that while captive animals are more docile (due to drugs and lack of stimulation), wild animals remain sharp and focused. Let us assume, however, that the ability to suffer is the same, or roughly the same, in captive and wild animals. How much do wild animals actually suffer? Very likely, some wild animals suffer very little. Some live long and peaceful lives, have few natural enemies, and have ample supplies of food. When they die, moreover, many animals die quick and painless deaths. The fact that some lives in the wild are pleasant, however, does not contradict the fact for billions of wild animals, life is filled with suffering. One prominent source of suffering is predation. Every day, millions of animals are eaten alive, and though some of them are killed quickly, larger animals will often stay alive for minutes or hours before they die of blood loss, suffocation, drowning, or internal bleeding from poisoning (Tomasik 2014b). While some become paralyzed, and are likely to feel nothing, others feel excruciating pain. Predation is a very visible cause of suffering. In response to this, Tyler Cowen (2003) and Jeff McMahan (2010) have argued that if we can easily prevent a predator attack, we have at least a pro tanto moral reason to do so. In their view, the way predators kill their prey is often so gruesome that if a human were to treat animals similarly, we would have strong reasons to intervene – and for the animal that is eaten alive, the species membership of the attacking predator is likely to matter very little. Though this is an important observation, I think Cowen and McMahan fail to appreciate that suffering caused by predation is likely to account for only a small fraction of the total suffering in nature. Though death from predation might be the most violent and visible cause of suffering, deaths from disease and parasites tend to be more drawn out in time. The same is true of deaths from droughts, floods, and freezing. Life in the wild is also a constant quest for nutrition; at any given time, thousands of animals are in the process of starving to death. Though there is no agent responsible for this suffering, and though it might be hard for us to detect it, the suffering is nonetheless real and prevalent. When a parent animal starves or freezes to death, gets eaten, or dies from disease, its young offspring will often face an equally painful death. This borders on an important point, namely that most suffering in nature is likely to be endured by very young individuals. The reason is not primarily that many parent animals die (although that is also the case), but that most wild animals give birth to many more offspring than are likely to reach adulthood. While humans normally give birth to just one child per year, and provide extensive care to each child (this is called the Kselection strategy), many animals follow a different reproductive strategy: they give birth to dozens or hundreds of offspring every year, and care very little for each individual (the r-selection strategy). These strategies both work to spread the parents’ genes in the population, but the r-selection strategy—which is most common in smaller animals—leads to enormous amounts of suffering because of the very large number of young individuals that are left to starve to death or get eaten, either by their stronger siblings or by other predators (for an elaboration, see Horta 2010). If the average female in a given animal population gives birth to 50 offspring every year—and the population size remains stable year after year—then the majority of individuals in that population will be individuals dying before reaching adulthood. If we grant that animals become conscious shortly after birth, as we assume to be the case with humans, their deaths will often involve pain, and since their lives are very short, they will have very few good things in life to weigh up for all that is bad. For these reasons, Richard Dawkins is almost certainly correct when he writes: The total amount of suffering per year in the natural world is beyond all decent contemplation. During the minute that it takes me to compose this sentence, thousands of animals are being eaten alive, others are running for their lives, whimpering with fear, others are being slowly devoured from within by rasping parasites, thousands of all kinds are dying of starvation, thirst and disease (Dawkins 1995: 131-32). Wild animal suffering is mostly invisible to us. Humans never see the vast majority of wild animals, and those that are seen by us are predominantly healthy and moving. We do not see the young individuals starving to death or the adult individuals being devoured by parasites, and we must keep in mind that even if we saw them, their suffering would often not be apparent to us. While we have evolved to pick up pain cues from other human beings, we are much worse at picking up pain cues from non-human animals, especially those that are genetically remote from us. Moreover, many animals hide signs of weakness and disease to avoid attracting predators (including humans) looking for easy prey. When Thomas Hobbes wrote that life, in the state of nature, is “solitary, poor, nasty, brutish, and short,” he meant human life (Hobbes 1651/1996: XIII.9). It seems, however, that the description is also fitting for the lives of many non-human animals. Because of the brutality of wildlife, one could even make the provocative case that a typical life in the wild is even more painful and distressing than a typical life in human captivity. Although factory farming is often grotesque, animals in captivity are seldom killed in ways that draw out their deaths over several minutes or hours; they are not exposed to predators until they are slaughtered; they typically have access to sufficient amounts of food and water; and the temperature tends to be comfortable. Concerning larger animals, such as cattle, individuals with serious Moen, O.M. Etikk i praksis. Nord J Appl Ethics (2016), 91–104 95 diseases will often be euthanized. For this reason, it is not clear that the average life in the wild is filled with any less suffering than the average life in captivity. However, even if wild animals do, on average, suffer less than captive animals, the sheer number of wild animals is still so overwhelming that the majority of suffering on Earth almost certainly takes place among animals living in wild nature.

#### Species-neutral valuations are the most ethical -- prioritizing humans is arbitrary, clearly self-interested, and the same logic as racism and sexism.

Harris 99 – Dr. John Harris, Ph.D., Sir David Alliance Professor of Bioethics and Research Director at the Centre for Social Ethics and Policy and Director of the Institute of Medicine Law and Bioethics at the University of Manchester, “The Concept of the Person and the Value of Life”, Kennedy Institute of Ethics Journal, Volume 9, Number 4, December, Project Muse

Some people have attempted to overcome, or rather side-step, this problem by simply stipulating that it is human beings that matter (see Warnock 1983). Although this move certainly avoids the problem, it does so at some cost. It is difficult to imagine how one would defend a moral theory that was founded on the stipulation of an arbitrary (and totally unjustified) preference for one kind of creature over another, particularly when this preference is asserted by self-interested individuals on behalf of their own kind. We are all too familiar with the sordid and disreputable history of similar claims in which the moral priority and superiority of "our own kind" has been asserted on behalf of Greeks at the expense of barbarians, whites over blacks, Nazis over Jews, and men over women. Simply stipulating arbitrarily the superiority of our own kind, whether defined by species membership, race, gender, nationality, religion, or any other nonmoral characteristic is, and has always been, disreputable. Membership of a natural kind, or of an ethnic, religious or other grouping, is not of itself a moral property. Potentiality The problem is to distinguish in some morally significant respect, human embryos from the embryos and indeed the adult members of any other species. Species membership is not enough because human embryos seem not to differ, except in species membership and in one other feature that I will discuss in a moment, from the embryos and indeed adult members of other species. Unlike adult members of many other species they are not conscious, although they may become so at some stage during their development. The one thing human embryos have that members of other species do not is their potential not simply to be born and to be human, but to become the sort of complex, intelligent, self-conscious, multifaceted creatures typical of the human species. There are, however, two fatal difficulties for the potentiality argument. Two Problems with Potentiality The logical difficulty. The logical difficulty is straightforward but telling. We are asked to accept that human embryos or fetuses are persons, morally important beings whose interests trump those of other sorts of beings, in virtue of their potential to become another sort of being. But it does not follow logically, even if we accept that we are required to treat ‘x’ in certain ways, and even if ‘a’ will inevitably become ‘x,’ that we must treat ‘a’ as if it had become ‘x,’ at a time or at a stage prior to its having become ‘x’. This is a rather cumbersome and inelegant way of making the point that acorns are not oak trees, nor eggs omelettes. Anyone reading this essay shares with its author one very important, inescapable potential. [End Page 297] We are both potentially dead, however, I hope neither of us is required to concede that it is therefore appropriate for anyone to treat us now, as if we already were dead. Further, it should be noted that the reader and I have this potential with far greater certainty than does the human embryo have the potential to become a glorious, sophisticated adult member of the human species. The scope of potential for personhood. The second difficulty with the potentiality argument involves the scope of the potential for personhood. If the human zygote has the potential to become an adult human being and is supposedly morally important in virtue of that potential, then what of the potential to become a zygote? Something has the potential to become a zygote, and whatever has the potential to become the zygote has whatever potential the zygote has. It follows that the unfertilized egg and the sperm, taken together, but as yet un-united, also have the potential to become fully functioning adult humans. It is sometimes objected that the individual sperm that will fertilize the egg is not identifiable in advance of conception. I am not sure why this is an objection, and it is true that in normal reproduction the identity of the sperm that will successfully fertilize the egg is unpredictable. But the identity of the sperm is not necessarily opaque. The technique known as ICSI (Intra Cytoplasmic Sperm Injection) does identify the individual sperm prior to fertilization. In addition, it is theoretically possible to stimulate eggs, including human eggs, to divide and develop without fertilization (parthenogenesis). As yet it has not been possible to continue the development process artificially beyond early stages of embryogenesis, but if it becomes possible then unfertilized eggs themselves, without need of sperm or cloning (see below), also would have the potential of the zygote. Finally, cloning by nuclear transfer, which involves deleting the nucleus of an unfertilized egg, inserting the nucleus taken from any adult cell, and electrically stimulating the resulting newly created egg to develop, can, in theory, produce a new human. This means that any cell from a normal human body has the potential to become a new “twin” of that individual. All that is needed is an appropriate environment and appropriate stimulation. But this of course is true of normal reproduction. The zygote only has the potential to become an adult member of the species if placed in the appropriate environment and treated thereafter in appropriate and complex ways. The techniques of parthenogenesis and cloning by nuclear substitution mean that conception is no longer the necessary precursor of human beings. [End Page 298] Thus if the argument from potential is understood to afford protection and moral status to whatever has the potential to grow into a normal adult human being, then potentially every human cell deserves protection. I shall not be concerned to refute such an ethic here, but will simply note that it is a very exhausting ethic. What is important about potential? The account of potentiality given here and elsewhere has been criticized for its simplicity. John Finnis (1995, p. 50), for example, has argued that: “[a]n organic capacity for developing eye-sight is not ‘the bare fact that something will become’ sighted; it is an existing reality, a thoroughly unitary ensemble of dynamically inter-related primordia of, bases and structures for, development.” He concludes that “there is no sense whatever in which the unfertilized ovum and that sperm constitute one organism, a dynamic unity, identity, whole.” On the other hand, the account of potential I have outlined treats potentiality as a rather more straightforward idea. A has the potential for Z if, when a certain number of things do and do not happen to A (or to A plus N), then A or A plus N will become Z. For even a “unitary ensemble of dynamically inter-related primordia of, bases and structures for development” must have a certain number of things happen to it and a certain number of things that do not happen to it if its potential is to be actualized. If this monstrous beast of Finnis’s is a zygote, it must implant, be nourished, and have a genetic constitution compatible with survival to term and beyond. Why, the list of things that must happen in normal reproduction, should not also include fertilization is unclear to me. Moreover Finnis’s insistence on a “unitary ensemble,” on “one organism,” seems vulnerable to cloning by nuclear substitution. For any of Finnis’s skin cells, if treated appropriately, might be cloned. As Julian Savulescu (1999, p. 91) has recently reminded us, “What happens when a skin cell turns into a totipotent stem cell is that a few of its genetic switches are turned on and others are turned off. To say it doesn’t have the potential to be a human being until its nucleus is placed in the egg cytoplasm is like saying my car does not have the potential to get me from Melbourne to Sydney unless the key is turned in the ignition.” Most importantly, however, Finnis’s objections, and those of a similar kind, miss the main point of the argument from potential. The potentiality of something, or some things, has moral importance on the assumption [End Page 299] that actualizing a particular potential is what matters. We would not worry about what precisely it is that has the potential to be a person, or an adult human being, if persons or adult humans did not matter. We are only interested in the potentiality argument because we are interested in the potential to become a particular, and particularly valuable, sort of thing. If, as I suggested above, the zygote (Finnis’s unitary ensemble) is important because it has the potential for personhood, and that is what makes it a matter of importance to protect and actualize its potential; then whatever has the potential to become a zygote must also be morally significant for the same reason. Those with their “eyes on the prize,” value potentiality for personhood, not because the potential is contained within “one organism,” but because it is the potential to become something the actualisation of which has moral importance. Gradualism Another approach to the question of when human life becomes morally important is the gradualist approach to moral status. It is suggested that since we know that a morally important person will almost certainly, eventually emerge, it is appropriate to accord a gradually increasing moral status to the embryo or fetus. This view is attractive and has about it the classic air of political compromise. However, if we know why, in virtue of what, it is that normal human adults possess personhood, then we will in principle be able to gauge more precisely when these features, whatever they are, might with some plausibility be said to be present in the emerging individual. Furthermore, if, as I suggest later, personhood turns out to be a threshold concept, then proximity to the threshold is unimportant compared with the importance of crossing it, and there is no justification for taking a gradualist approach to personhood or moral status. Brain Birth Finally, Michael Lockwood (1988) has suggested an elegant solution to the problem of when morally important life begins. Noting that “brain death” is an almost universally accepted criterion of death, and hence of the termination of the moral status of the individual, he has proposed that “brain birth” might be a sensible point at which to date the genesis of moral status. The problem is that “brain death,” although almost universally accepted as a criterion of death, seems less acceptable as a criterion of loss of moral status. Discussion of why this is so is postponed, [End Page 300] however, until the consideration of a case of persistent vegetative state in the penultimate section of this paper. The Meaning of Life Let us step aside for a moment from the previous concerns and consider the question “what is the meaning of life?” rather than “what is it that gives moral status or ultimate value to life?” Philosophers, of this century at least, have generally shied away from this sort of question, except, that is, for the distinguished and much underrated Douglas Adams. In his seminal trilogy, “The Hitchhiker’s Guide to the Galaxy,” Adams (1972, Ch. 27) conducted a famous thought experiment. He imagined a race of beings that wished to solve the ultimate question, the question of the meaning of “life, the universe and everything,” and to this end constructed a hyper-intelligent computer to solve the problem. After seven and a half million years, the computer came back with the answer “42.” This answer is illuminating in an interesting way. Clearly it seems unsatisfactory as an answer to the question: “What is the meaning of life, the universe and everything?” However, the problem with criticizing the answer is that we have not the most rudimentary of idea of what a more plausible (less outrageous) answer might look like. We seem to lack a perspective from which to criticize any answer offered. Nonhuman Persons If we turn now from this question of the meaning of life to questions of its value and ultimate status, things are rather different. Here we do seem to have a perspective, not only from which to criticize possible answers to the question, but from which to construct our own answer. Consider the question of whether there are persons on other planets. Although we do not know the answer to this question, we do know what would convince us that we had found an affirmative answer. We have, in the back of our minds at least, an idea of what we are looking for when we look for people, or evidence of people, on other planets. Let us be clear, however, about what we are *not* looking for. First, we are not looking exclusively or primarily, for human beings. We do not expect persons on other planets, if there are any, necessarily to be members of our own species. Second, we are not necessarily even looking for organic life forms, it may be that we will become convinced that self-constructing machines of sufficient intelligence would count as persons. Third, we are not looking for nonpersonal life forms, although we may also find these and be excited if we do. Neither are we looking for the sort of machinery that would not count as a person (perhaps machinery left behind by persons long since deceased). These observations show us that we do not, in fact, regard species membership as hugely significant in trying to understand what a person might be. Nor even do we require that persons be organic life forms. What then are we looking for? What should convince us that we had discovered persons on other planets? Suppose, that instead of us discovering persons on other planets, they discovered us. Demonstrating their vastly superior technology by arriving on Earth having traversed unimaginable interstellar distances, the extraterrestrials are hungry and tired after their long journey. What could we point to about ourselves that ought to convince the extra-terrestrials that they had discovered persons, morally significant beings of special importance, on another planet? What could we say of ourselves that should convince them of the appropriateness of "having us for dinner" in one sense rather than another? What should convince them to treat us as dinner guests rather than the dinner itself? What makes for a moral distinction between ourselves and, say, lettuces or turnips? Toward the end of the seventeenth century in his "Essay Concerning Human Understanding" the philosopher John Locke attempted to answer this question in a way that has scarcely been surpassed. He wrote: We must consider what person stands for; which I think is a thinking intelligent being, that has reason and reflection, and can consider itself the same thinking thing, in different times and places; which it does only by that consciousness which is inseparable from thinking and seems to me essential to it; it being impossible for anyone to perceive without perceiving that he does perceive. (Locke 1690, Ch. 27, Book II, p. 188) It seems to me that it is beings possessing these capacities, or something closely akin to them, that we are looking for when we ask the question "Are there persons on other planets?" And we must hope that if it is others of vastly superior technology that are asking the question, that they recognize in us fellow creatures of moral standing, fellow persons. It is a species-neutral description but it identifies those features, the potential for which is so important to the failed potentiality argument and the presence of which in space creatures should surely convince us that we had at last encountered persons elsewhere in the universe.

#### The military is building isomer bombs that destroy the quantum vacuum- even testing destroys it

Bekkum 4 (Gary S., Founder – Spacetime Threat Assessment Report Research, “American Military is Pursuing New Types of Exotic Weapons”, Pravda, 8-30, <http://www.starstreamresearch.com/dark_matters.htm>) recut Valiaveedu

Recently the British science news journal "New Scientist" revealed that the American military is pursuing new types of exotic bombs - including a new class of isomeric gamma ray weapons. Unlike conventional atomic and hydrogen bombs, the new weapons would trigger the release of energy by absorbing radiation, and respond by re-emitting a far more powerful radiation. In this new category of gamma-ray weapons, a nuclear isomer absorbs x-rays and re-emits higher frequency gamma rays. The emitted gamma radiation has been reported to release 60 times the energy of the x-rays that trigger the effect. The discovery of this isomer triggering is fairly recent, and was first reported in a 1999 paper by an international group of scientists. Although this controversial development has remained fairly obscure, it has not been hidden from the public. Beyond the visible part of defense research is an immense underground of secret projects considered so sensitive that their very existence is denied. These so-called "black budget programs" are deliberately kept from the public eye and from most political leaders. CNN recently reported that in the United States the black budget projects for 2004 are being funded at a level of more than 20 billion dollars per year. In the summer of 2000 I contacted Nick Cook, the former aviation editor and aerospace consultant to Jane's Defence Weekly, the international military affairs journal. Cook had been investigating black budget super-secret research into exotic physics for advanced propulsion technologies. I had been monitoring electronic discussions between various American and Russian scientists theorizing about rectifying the quantum vacuum for advanced space drive. Several groups of scientists, partitioned into various research organizations, were exploring what NASA calls "Breakthrough Propulsion Physics" - exotic technologies for advanced space travel to traverse the vast distances between stars. Partly inspired by the pulp science fiction stories of their youth, and partly by recent reports of multiple radar tracking tapes of unidentified objects performing impossible maneuvers in the sky, these scientists were on a quest to uncover the most likely new physics for star travel. The NASA program was run by Marc Millis, financed under the Advanced Space Transportation Program Office (ASTP). Joe Firmage, then the 28-year-old Silicon Valley CEO of the three billion dollar Internet firm US Web, began to fund research in parallel with NASA. Firmage hired a NASA Ames nano-technology scientist, Creon Levit, to run the[International Space Sciences Organization](http://www.starstreamresearch.com/isso.htm), a move which apparently alarmed the management at NASA. The San Francisco based Hearst Examiner reported that NASA's Office of Inspector General assigned Special Agent Keith Tate to investigate whether any proprietary NASA technology might have been leaking into the private sector. Cook was intrigued when I pointed out the apparent connections between various private investors, defense contractors, NASA, INSCOM (American military intelligence), and the CIA. While researching exotic propulsion technologies Cook had heard rumors of a new kind of weapon, a "sub-quantum atomic bomb", being whispered about in what he called the "dark halls" of defense research. Sub-quantum physics is a controversial re-interpretation of quantum theory, based on so-called pilot wave theories, where an information field controls quantum particles. The late Professor David Bohm showed that the predictions of ordinary quantum mechanics could be recast into a pilot wave information theory. Recently Anthony Valentini of the Perimeter Institute has suggested that ordinary quantum theory may be a special case of pilot wave theories, leaving open the possibility of new and exotic non-quantum technologies. Some French, Serbian and Ukrainian physicists have been working on new theories of extended electrons and solitons, so perhaps a sub-quantum bomb is not entirely out of the question. Even if the rumors of a sub-quantum bomb are pure fantasy, there is no question that mainstream physicists seriously contemplate a phase transition in the quantum vacuum as a real possibility. The quantum vacuum defies common sense, because empty space in quantum field theory is actually filled with virtual particles. These virtual particles appear and disappear far too quickly to be detected directly, but their existence has been confirmed by experiments that demonstrate their influence on ordinary matter. "Such research should be forbidden!" In the early 1970's Soviet physicists were concerned that the vacuum of our universe was only one possible state of empty space. The fundamental state of empty space is called the "true vacuum". Our universe was thought to reside in a "false vacuum", protected from the true vacuum by "the wall of our world". A change from one vacuum state to another is known as a phase transition. This is analogous to the transition between frozen and liquid water. Lev Okun, a Russian physicist and historian recalls Andrei Sakharov, the father of the Soviet hydrogen bomb, expressing his concern about research into the phase transitions of the vacuum. If the wall between vacuum states was to be breached, calculations showed that an unstoppable expanding bubble would continue to grow until it destroyed our entire universe! Sakharov declared that "Such research should be forbidden!" According to Okun, Sakharov feared that an experiment might accidentally trigger a vacuum phase transition.

#### Quantum vacuum mining destroys the universe- it’s feasible and inevitable

Folger 8 – Tim Folger, Contributing Editor at Discover Magazine, Writer for National Geographic, MA in Journalism from New York University, BA in Physics from UC Santa Cruz, “Nothingness of Space Could Illuminate the Theory of Everything”, Discover Magazine, 7-18, http://discovermagazine.com/2008/aug/18-nothingness-of-space-theory-of-everything

When the next revolution rocks physics, chances are it will be about nothing—the vacuum, that endless infinite void. In a discipline where the stretching of time and the warping of space are routine working assumptions, the vacuum remains a sort of cosmic koan. And as in the rest of physics, its nature has turned out to be mind-bendingly weird: Empty space is not really empty because nothing contains something, seething with energy and particles that flit into and out of existence. Physicists have known that much for decades, ever since the birth of quantum mechanics. But only in the last 10 years has the vacuum taken center stage as a font of confounding mysteries like the nature of dark energy and matter; only recently has the void turned into a tantalizing beacon for cranks. As one blond celebrity heiress and embodiment of emptiness might say, nothing is hot.

To investigate the mysteries of the void, some physicists are using the biggest scientific instrument ever built—the just-completed Large Hadron Collider, a huge particle accelerator straddling the French-Swiss border. Others are designing tabletop experiments to see if they can plumb the vacuum for ways to power strange new nanotech devices. “The vacuum is one of the places where our knowledge fizzles out and we’re left with all sorts of crazy-sounding ideas,” says John Baez, a mathematical physicist at the University of California at Riverside. Whether in the visionary search for the engine of cosmic expansion or the near-fruitless quest for perpetual free energy, the vacuum is where it’s happening. By mining the vacuum’s riches, a true theory of everything may yet emerge.

Empty space wasn’t always so mystifying. Until the 1920s physicists viewed the vacuum much as the rest of us still do: as a featureless nothingness, a true void. That all changed with the birth of quantum mechanics. According to that theory, the space around a particle is filled with countless “virtual” particles rapidly bursting into and out of existence like an invisible fireworks display.

Those virtual quantum particles are more than a theoretical abstraction. Sixty years ago a Dutch physicist named Hendrik Casimir suggested a simple experiment to show that virtual particles can move objects in the real world. What would happen, he asked, to two metal plates placed very close together in a complete vacuum? In the days before quantum mechanics, physicists would have said that the plates would just sit there. But Casimir realized that the net pressure of all the virtual particles—the stuff of empty space—outside the plates should exert a minuscule force, a nudge from nothing that would push the plates together.

Physicists tried for decades to measure the Casimir force with great precision, but it wasn’t until 1997 that technology caught up with theory. In that year, physicist Steve Lamoreaux, now at Yale, managed to detect the feeble Casimir force on two small surfaces separated by a few thousandths of a millimeter. Its strength was about equal to the force that would be exerted against the palm of one’s hand by the weight of a single red blood cell.

At first most physicists regarded the Casimir force as a quantum oddity, something of no practical value. Now that has changed: Forward thinkers see it as an important energizer for the tiniest of machines, devices on the nano scale, and a few labs are working on ways to use the force to defy the conventional limitations of mechanical design. Federico Capasso, a physicist at Harvard, leads a small team that is trying to create a repulsive Casimir force by tinkering with the shapes of plates or with the coatings used to cover them. His entire set of experiments fits on a desktop, and the objects he works with are so small that most of them cannot be seen without a microscope.

“Once you have a repulsive force between two plates, you should be able to eliminate static friction,” Capasso says. That could lead to a host of useful applications, including tiny frictionless bearings or nanogears that spin without touching. “But the experiments are enormously difficult, so I cannot tell you when and how.”

For all its strangeness, the Casimir force may be the one property of empty space that does not baffle today’s physicists. It is garden-variety quantum mechanics, weird but not unexpected. The same can’t be said about dark energy, a truly astonishing discovery made by astronomers a decade ago while observing distant exploding stars. The explosions revealed a universe expanding at an ever-faster rate, a finding at odds with previous expectations that the expansion of the cosmos should be slowing down, braked by the collective gravitational pull of all the matter out there. Some unknown form of energy—physicists call it dark energy simply for lack of a more descriptive term—appears to be built into the very fabric of space, countering the gravitational pull of matter and pushing everything in the universe apart. Some theorists speculate that dark energy might cause a runaway expansion of the universe, resulting in a so-called Big Rip some 50 billion years from now that would tear the cosmos to pieces, shredding even atoms.

The observations have allowed physicists to estimate the quantity of dark energy by deducing the force needed to produce the accelerating effect. The result is a minuscule amount of energy for every cubic meter of vacuum. Since most of the cosmos consists of empty space, though, that little bit adds up, and the total amount of dark energy completely dominates the dynamics of the universe.

With the discovery of dark energy came difficult questions: What is this energy, and where does it come from? Physicists simply do not know. According to quantum mechanics, the energy of empty space comes from the virtual particles that dwell there. But when physicists use the equations of quantum theory to calculate the amount of that virtual energy, they get a ridiculously huge number—about 120 orders of magnitude too large. That much energy would literally blow the universe apart: Objects a few inches from us would be carried away to astronomical distances; the universe would literally double in size every 10-43 second, and it would keep doubling at that rate until all the vacuum energy was gone. This may be the most colossal gap between observation and theory in the history of science. And it means that physicists are missing something fundamental about the way the universe works.

“We’ve made a prediction on the basis of our best theories, and it is wrong, wildly wrong,” says Sean Carroll, a theoretical physicist at the California Institute of Technology. “That means we don’t just tweak a parameter here and there; we really have to think deeply about what our theories are.”

Even if no one knows where the energy of empty space comes from or why it has the value it does, there is now no doubt that it exists. And if there is energy to be had, there is inevitably somebody out there thinking of how to exploit it. The notion of limitless energy from empty space has inspired legions of wannabe physicists who dream of developing the ultimate perpetual-motion device, a machine that would solve the world’s energy problems forever. A quick Internet search for the words free energy and vacuum turns up pages and pages of schemes for tapping the vacuum’s energy. I ask John Baez if such efforts are as hopeless as previous perpetual-motion machines. Are they equally crazy and doomed to failure?

“Perhaps not as doomed as trying to prove the world is flat,” Baez says. “One thing I can say is that I sure hope it doesn’t work, because if you could extract energy from the vacuum, it would mean that the vacuum is not stable. For normal physicists,” he adds with a laugh, “the definition of the vacuum is that it’s the lowest-energy situation possible—it has less energy than anything else.” In short, Baez says, while we may be able to get energy from the vacuum, success “would mean the universe is far more unstable than we ever dreamed.”

The reasoning goes like this: If the vacuum is not at the lowest energy state possible, then at some point in the future, the vacuum could fall to a lower state, pulsing out energy that would threaten the very structure of the cosmos. If some clever engineer were ever to extract energy from the vacuum, it could set off a chain reaction that would spread at the speed of light and destroy the universe. Free energy, yes, but not what the inventors had in mind.

#### Tech advancements make future time travel certain

Elmi 18 – Awes Faghi Elmi, Contributing Writer at n’world Publications, BS in Forensic Science from London South Bank University, Extended Diploma in Physics with Distinction from Leyton Sixth Form College, Futurist, “Technological Progress Might Make Possible Time Travel And Teleportation”, Medium, 8-13, <https://medium.com/nworld-publications/technological-progress-might-make-possible-time-travel-and-teleportation-45176c3c89bc> [typo edited]

Can we travel through time?

This is a question that many people ask their-selves. This question has occurred many times. It is said that time travel is possible and in fact it is. The key things needed to travel through time are speed and kinetic energy. Einstein’s theory also known as the theory of relativity can be used [to] ro understand how to deal with travelling to the future. Einstein showed that travelling forward in time is easy. According to Einstein’ theory of relativity, time passes at different rates for people who are moving relative to one another although the effect only becomes large when you get close to the speed of light. Time travel sometime can cause side effects called paradoxes. These paradoxes can occur especially when going back in time. As if only one thing even the minimum of the details can change something big may happen in the future.

Another scientist who believes that time travel is possible after Einstein is Brian Cox who as Einstein believes that we are only going to be able to travel in the future. This obviously would happen if having a super-fast machine that allows you to go into the future. Cox also agrees on Einstein’s theory of relativity which states that to travel forward in time, something needs to reach speeds close to the speed of light. As it approaches these speeds, time slows down but only for that specific object. They both think as said, that time travel to the future is possible however travelling back in time is impossible, as something must be really as fast as the speed of light. This however for some scientists can be wrong. They state that with the technology that we have now it could be possible to build some sort of machine who will actually be able to travel in both future and past.

A wormhole as shown in the image is a theoretical passage through space-time that could create shortcuts for long journeys across the universe. Wormholes are predicted by the theory of general relativity. However, wormholes bring with them the dangers of sudden collapse, high radiation and dangerous contact with exotic matter. The public knows that time travel is possible but humans at the moment are not able to. However other sources except theories of the past are currently trying to develop a way of time travel. The audience actually cannot wait that this will happen as many media state, such as BBC. Many TV programmes talk about both time travel and teleportation.

Teleportation

Quantum teleportation is a process by which quantum information (e.g. the exact state of an atom or photon) can be transmitted (exactly, in principle) from one location to another, with the help of classical communication and previously shared quantum entanglement between the sending and receiving location.

Albert Einstein, one of the best intelligent minds in the world, believed that teleportation using quantum mechanics was and will be impossible. This however had a breakthrough few scientists in Delft University were finally able to learn how to use the quantum mechanics to teleport. In fact they can make travel through space quantum data concerning the spin state of an electron to another electron few 10 feet away. Thanks to this some public would believe that teleportation is actually real and that this will one day be able to work even on humans.

Between time travel and teleportation, teleportation things are different. Many believe that teleportation is actually impossible as it is needs that a solid material breaks the law of space and time. A solid material must disappear to then reappear in another place. This however is actually possible and in fact some scientists finally were able to teleport a solid material, which disappeared and appeared 10 feet away from the lab. The public did not believe in this but newspapers and website articles talk about it confusing the public, I personally would not believe this as it actually is impossible for something to disappear and reappear 10 feet away from you. However it can still happen if improving the machine one day this might be able to teleport people.

Time travel

Science have proven that one day in the future, it will be able to travel through time. Physicists state that time travel is possible. This however is something that humans cannot achieve easily. Few are the things necessary to travel in time, speed and kinetic energy. Some physicists believe that by using enough speed this last will be able to break through the kinetic energy created from the speed and finally enter in the universe of the time and space continuum. Once you are in this place you can travel through different eras. This however is what many physicists believe using speed. Time travel is discussed a lot in this period and many believe that this one day will happen. Time travel is actually possible and this is said from one of the best minds of the world which was Albert Einstein. Einstein believes as many other physicists that time travel is possible thanks to the theory of relativity. For Einstein the speed needed to time travel must be very close to the speed of light, which is currently impossible, something must be fast near this speed, 299 792 458 m / s Since this was said to the public, this last right now believe that it will be impossible unless ta machine fast enough is built.

The pace with which technology has been progressing in the last couple of years would make it undoubtable to see teleportation and time travel as the next big things. Today’s world is mainly focusing on digital transformation with topics covering cloud computing, blockchain and most importantly artificial intelligence. Time will reveal what’s next on the technology roadmap.

#### That collapses the Universe

Bowers 16 – Steve Bowers, Control Officer in the United Kingdom, Executive Editor and Moderator of the Orion’s Arm Universe Project, Contributing Author for the Orion’s Arm Novella Collection, “WHY NO TIME TRAVEL IN OA”, 1-1, https://orionsarm.com/page/77

Time travel into the future is not only possible but commonplace in the OA Universe (relativistic travel, nanostasis, etc.). Unfortunately, this is a one-way journey. Here is one answer why we don't have time travel into the past in the OA universe. Why Time Travel Would Destroy the Universe Time travel is very dangerous and uncomfortable to contemplate, and even if possible, will no doubt never be useful. It is possible to imagine ways breaking the chain of causality using wormholes as currently described in OA. The wormhole mouths can be displaced in time as well as in space; if one wormhole mouth is carried off on a relativistic spacecraft then brought back, it becomes displaced in time by time dilation. In effect it is the equivalent of the younger twin in the famous Twin Paradox; but it is possible to travel through the mouth of the hole to connect the younger mouth with the older mouth and vice versa. This would allow a traveller to step back into the past. Time Travel: the Options 1. The Boring Physics conjecture - all kinds of time travel are impossible, and wormhole travel of any kind is also impossible in every case. This may the case in the real universe, but in the Orion's Arm universe the existence of traversable wormholes is a basic precept, so that hypothesis cannot apply within the context of OA. 2. The Chronological Protection conjecture — wormholes are possible, but some sort of physical mechanism or set of mechanisms prevents them from becoming time machines. Matt Visser described one such mechanism whereby a flux of virtual particles would be generated every time a time machine created a time loop, known as a Closed Timelike Curve (CTC). A related possibility is the existence or formation of an event horizon between areas of space where time travel is possible (certain wormholes) and areas where it is not possible (the rest of the universe). This is the situation that exists in the Orion's Arm scenario; it may, or may not be the situation in the real world too. 3. The Self-Consistency principle - in this scenario you can go back in time, but you can't change history. This principle was developed by Igor Novikov in the 1980's (Old Earth calendar). If there is only one timeline in the universe, then going back in time forces you to act only in ways that are consistent with the known history of events; that means you cannot kill your grandfather before your father is conceived, no matter how hard you try. This limitation of action might lead to absurd developments; if it is possible to send tourists back in time to watch historical events, they might become so numerous that they make up the majority of people present at such events. Dealey Plaza might be full of time tourists in November 1963 but they cannot act to prevent the assassination of Kennedy, or act in any way inconsistent with the known historical evidence. However if there is more than one timeline in the universe, as described in the Many Worlds Hypothesis, then time travel can be consistent — going back in time simply creates a new, consistent timeline, one of countless others created by quantum events. These timelines are each self-consistent, but as every act of time-travel changes the timeline and creates a new history, it is effectively impossible to travel to one's own past; only to the past of a different timeline, created by your own presence and potentially very different to the one you started in. 4. The Radical Rewrite conjecture - in this scenario you can change your own history, which means the whole of time is mutable and can be shaped to one's own whim. If there is only one universe, history becomes fluid. You might go back and change history, then another time traveller will change it again almost immediately, and the present will be an ever-changing kaleidoscope, with a different President or Prime Minister every day; you will go to sleep in a mansion, and wake up in a mobile home; your car will change from a Buick to a Volksvagen while you are driving it. What is worse, you will not be aware of such changes happening — you will suddenly have a whole new past and a new set of memories created by a meddling time traveller long ago. In some versions of this scenario, each time traveller which goes back in time effectively destroys his or her own future existence, and becomes orphaned in time. Such a lack of continuity will invoke the Chronological Protection Conjecture: the universe will morph and mutate until it reaches a history in which time travel has never been invented, ever, at any time in the past or future. This is the only stable state for the universe, the one we are in now. The CPC has been proposed by many people, including Hawking, Asimov and Larry Niven. Chronological Collapse If the universe does allow reverse time travel, usable by sentient/sophont entities, it won't stop at one or two little historical research trips . . . If there is no effective chronological protection mechanism, the universe of today will be overrun with travellers from the future. Even if there is no 'Big Rip' where the Universe tears itself apart through accelerating expansion, hundreds of trillions of years from now the cosmos will be a slowly dying place. Even red dwarf stars will eventually burn out, leaving the inhabitants of the far future only their dying embers to gather energy from, although the creation and merger of black holes could perhaps keep civilisation going for an (admittedly very long) while. Eventually the entities of the far future will be limited to reversible computation to save energy. This means confining themselves to a very limited set of mental processes. This prospect would surely not appeal to the heirs of once-mighty advanced civilisations. If time travel were possible then refugees from the far future would flood back, sometimes in multiple instances. The future sophonts would come back in an exponentiating wave to constantly change the present and the past, and whole galaxies of material particles will begin to exist in space time reference that did not have them before - some? many? most? matter and events may turn out to be acausal, going round and round in closed timelike loops and increasing the total mass of the universe, which may begin to collapse in the distant future, sending chronistic refugees in massive tardises back to our time thus accelerating the collapse; increasing the mass of the present day universe until it collapses. The collapse will get closer to the present day, until it eventually happened yesterday and we will cease to exist . . . believe me, you don't want to go there.

#### An avalanche of dark energy and matter research is coming quickly

Bertone 18 – Dr. Gianfranco Bertone, Professor in the GRAPPA Institute & Institute of Physics at the University of Amsterdam, PhD in Astrophysics from the University of Oxford, and Dr. Tim M.P. Tait, Professor in the Department of Physics and Astronomy at the University of California, Irvine, PhD in Physics from Michigan State University, BSc in Physics from UC San Diego, Former Research Associate at the Fermi National Accelerator Laboratory and Argonne National Laboratory, “A New Era in the Quest for Dark Matter”, Nature, 10-4, https://arxiv.org/pdf/1810.01668.pdf

The Future In the quest for dark matter, naturalness has been the guiding principle since the dark matter problem was established in the early 1980s. Although the absence of evidence for new physics at the LHC does not rule out completely natural theories, we have argued that a new era in the search for dark matter has begun, the new guiding principle being “no stone left unturned”: from fuzzy dark matter (10−22 eV) to primordial black holes (10 M ), we should look for dark matter wherever we can. It is important to exploit to their fullest extent existing experimental facilities, most notably the LHC, whose data might still contain some surprises. And it is important to complete the search for WIMPs with direct detection experiments, until their sensitivity reaches the so-called neutrino floor94 . At the same time we believe it is essential to diversify the experimental effort, and to test the properties of dark matter with gravitational waves interferometers and upcoming astronomical surveys, as they can provide complementary information about the nature of dark matter. New opportunities in extracting such information from data arise from the booming field of machine learning, which is currently transforming many aspects of science and society. Machine learning methods have been already applied to a variety of dark matter-related problems, ranging from the identification of WIMPs from particle and astroparticle data95, 96 to the detection of gravitational lenses97, and from radiation patterns inside jets of quarks and gluons at the LHC98 to real-time gravitational waves detection99. In view of this shift of the field of dark matter searches towards a more data-driven approach, we believe it is urgent to fully embrace, and whenever possible to further develop, big data tools that allow to organize in a coherent and systematic way the avalanche of data that will become available in particle physics and astronomy in the next decade.

#### That triggers quantum effects that violently collapse the vacuum---destroying the Universe

Arkell 14 – Esther Inglis-Arkell, Contributor to the Genetic Literacy Project, Contributing Editor and Senior Reporter at io9, Freelance Writer for Ars Technica, BS in Physics from Dartmouth College, “We Might Be Destroying The Universe Just By Looking At It”, io9 – Gizmodo, 2-3, https://io9.gizmodo.com/we-might-be-destroying-the-universe-just-by-looking-at-1514652112

It's not often that astronomy goes well with the book of Genesis. But this is a theory that evokes the line, "But of the tree of the knowledge, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die." In this theory, knowledge doesn't just kill you — it kills the entire universe. Indeed, one physicist speculates that continuous observation of the universe might put it into a state that will destroy us all. The Curse of the Big Bang Our universe's eventual demise, in this case, springs from the fact that it wasn't properly created. The big question has always been, how does something come from nothing? If, in the beginning, there was nothing but a vacuum, devoid of energy or matter, where did the universe come from? As it turns out, not all vacuums are alike - some of them are what's called "false vacuums." They are "bubbles" of space that look like vacuums, but aren't actually at their bottom energy state. They can collapse at nearly any time, and go into their ground energy state. The collapse of such a false vacuum releases energy. At first, many physicists thought this is how our universe began. A false vacuum collapsed down to a true one, and the matter and energy of our universe was the result of its collapse. It's also possible that the collapsing false vacuum didn't create a true vacuum. It simply created, along with all that matter and energy, another false vacuum. The universe we live in now might simply be a long-lived bubble of false vacuum that's not really at its lowest energy state. If you have trouble believing that the vacuum of space that astronomers observe isn't at its lowest energy state - ask yourself what dark energy is if not a higher-than-expected energy state for the universe. We might be in a fragile, and unstable, bubble of universe that could collapse at any time. But There's Hope! (Unless We Screw It Up) It's unpleasant to think the universe might collapse out of existence at any moment. Especially since, as the collapse won't exceed the speed of light, we'll probably see it coming for us, knowing we're unable to escape it. Fortunately, we have (theoretical) options. Dark energy drives the expansion of the universe. Although bubbles decay, they decay along different lines according to the energy state they're in when they start collapsing. If they're in a high energy state, the rate of decay is also high. If they're in a low energy state, the rate of decay is slow. Put the fast rate of decay in a race against the expansion of the universe, and we are all winked out of existence. Put the slow rate of decay in that same race, and we all have the chance to live productive lives. The problem is, when we observe a system, we can keep it in a certain state. Studies have shown that repeatedly observing the state of an atom set to decay can keep that atom in its higher-energy state. When we observe the universe, especially the "dark" side of the universe, we might be keeping it in its higher-energy state. If the process of collapse happens when it is in that state, the universe will cease to exist. If we stop looking, and the universe quietly shifts to a state at which its decay is slower, then we're all saved. The more we look at the universe, the more likely it is to end.