# King R1 – 1NC v Sequoia AS

## 1

#### Interpretation: Appropriation means exclusive control or use that is permanent

TIMOTHY JUSTIN TRAPP 13 JD Candidate @ UIUC Law, TAKING UP SPACE BY ANY OTHER MEANS: COMING TO TERMS WITH THE NONAPPROPRIATION ARTICLE OF THE OUTER SPACE TREATY UNIVERSITY OF ILLINOIS LAW REVIEW [Vol. 2013 No. 4]

The issues presented in relation to the nonappropriation article of the Outer Space Treaty should be clear.214 The ITU has, quite blatantly, created something akin to “property interests in outer space.”215 It allows nations to exclude others from their orbital slots, even when the nation is not currently using that slot.216 This is directly in line with at least one definition of outer-space appropriation.217 [\*\*Start Footnote 217\*\*Id. at 236 (“Appropriation of outer space, therefore, is ‘the exercise of exclusive control or exclusive use’ with a sense of permanence, which limits other nations’ access to it.”) (quoting Milton L. Smith, The Role of the ITU in the Development of Space Law, 17 ANNALS AIR & SPACE L. 157, 165 (1992)). \*\*End Footnote 217\*\*]The ITU even allows nations with unused slots to devise them to other entities, creating a market for the property rights set up by this regulation.218 In some aspects, this seems to effect exactly what those signatory nations of the Bogotá Declaration were trying to accomplish, albeit through different means.219

#### Violation: Megaconstellations do not appropriate – reject non-legal interpretations

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No, This Is Not Impermissible Appropriation

An opposite conclusion can also be reasonably arrived at when approached along the following lines. The counter argument would assert that the deployment and operation of these global constellations, such as SpaceX’s Starlink, OneWeb, Kepler, etc., are aligned with and in full conformity with the laws applicable to outer space. These constellations are merely the exercise and enjoyment of the freedom of exploration and use of outer space and do not constitute any impermissible appropriation of the orbits that they transit.

Freedom of Access and Use Permits Constellations

Rather than being a violation of other’s rights to access and explore outer space, the deployment of these constellations is more correctly viewed as the exercise and enjoyment of the right to access and use outer space. Article I of the Outer Space Treaty establishes a right to access and use space without discrimination.

Not allowing an actor to deploy spacecraft, regardless of their number or destination, would be infringing with the exercise of their freedom. It would be discriminatory. Additionally, actors do not need permission from any other State, or group of States, to access and explore outer space.

Aligned with the Intentions of the Outer Space Treaty

This use of outer space by constellations in LEO, while not explicitly mentioned by the drafters of the Outer Space Treaty or other space law, actually is the fulfillment of their visions for the use of outer space. The preamble to the Outer Space Treaty (which contains the subject matter and purpose of the treaty and can be used for interpreting the operative articles of the treaty) speaks of the aspirations of humanity in exploring and using outer space. It is easy to see constellations that will provide Internet access to the world as fulfilling the visions of the drafters:

The States Parties to this Treaty, Inspired by the great prospects opening up before mankind as a result of man’s entry into outer space, Recognizing the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes, Believing that the exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or scientific development, Desiring to contribute to broad international cooperation in the scientific as well as the legal aspects of the exploration and use of outer space for peaceful purposes, Believing that such cooperation will contribute to the development of mutual understanding and to the strengthening of friendly relations between States and peoples, As such, subsequent article of the Outer Space Treaty should be read in a permissive light, as permitting constellations, rather than a restrictive light which only sees potential negative aspects of constellations. Due Regard and Harmful Contamination Will be Addressed

Operators in LEO are well aware of the challenges to space sustainability that their constellations will pose and will be taking efforts to mitigate the creation of debris. OneWeb is keenly focused on space sustainability and has even argued that the current norm, whereby spacecraft are not in space for longer than 25 years and are deorbited from lower orbits at the end of their lifetime (aka post mission disposal), is not sufficient to keep outer space clean and that shorter lifespan limits should be imposed on operators, especially operators in LEO, and operators of small satellites.

Additionally, these systems will be able to cooperate with emerging space safety and space traffic management plans and can operate in ways that do not restrict or impinge on other users of the space domain. Because due regard is therefore displayed for the space domain, and to the interests of others, these constellations do not prejudice or infringe upon the freedoms of use and exploration of the space domain and are therefore not occupation, or possession, much less appropriation.

This Does Not Constitute Possession, or Ownership, or Occupation

The use of LEO by satellite constellations is substantially similar to the use of GSO, and therefore permissible. In each region, individual actors are given permission - either from a national administrator or from an international governing body (the ITU) via a national administer–to use precoordinated subsections of space. In a way that is overwhelmingly similar to the use of orbital slots in GSO, the placement of spacecraft into orbits in LEO or higher orbits does not constitute possession, ownership, or occupation of those orbits. This is because States (and their companies) have been occupying orbital slots in GSO for decades, and these uses of GSO have never been accused of “appropriating” GSO. The users have never claimed to be appropriating GSO, and their exercising of rights to use GSO is respected by other actors in the space domain. This is the same situation for other orbits, including LEO and other non-Geostationary orbits.

And while GSO locations are relatively stable (subject to space weather and other perturbations, and require stationkeeping), spacecraft in LEO are actually moving through space and are not stationary, so it is even more difficult to see this use by constellations as occupation, much less appropriation. Moreover, Space Situational Awareness (SSA) and Space Traffic Management (STM) will allow other uses to use these orbits, and nothing about the use of any one user necessarily precludes others. Lastly, there is no intention by operators of constellations to exclusively occupy, must less possess or appropriate, these orbits. Would not the appropriation of outer space be an intentional, volutional act? No such intention can be found in the operators of global constellations.

#### Standards:

#### 1] Precision – non-topical affs violate tournament rules so the judge doesn’t have the jurisdiction to vote on them and it controls the internal to pragmatic offense in a question of models.

#### 2] Limits – including temporary occupation is a limits disaster – any aff about a single spaceship, satellite, or weapon would be T because they temporarily occupy space. That explodes neg prep burden and draws irreciprocal lines of debate.

#### Fairness is a voter – it’s a gateway issue to the ballot.

#### Drop the debater to deter future abuse.

#### CI – Reasonability is arbitrary and we don’t know the brightline while prepping. Collapses since it uses an offense/defense paradigm to win it.

#### No RVIs- A] Illogical- you don’t win for being fair B] Encourages baiting theory which proliferates abuse C] Chills checking abuse for fear of the RVI

## 2

#### Behold the image of the disgusting disabled child, which causes one to wince in the face of egoistic empathy. This is self-reflection, a process constitutive of the psyche that results in the disability drive, the culmination of primary pity where the non-disabled subject embodies itself in the position of the disabled object, and secondary pity, which portrays the ego’s overcompensation to regain its position and pushes a desire from lack for the eradication of disability.

**Mollow 15** Anna (2015): The Disability Drive, 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 <https://digitalassets.lib.berkeley.edu/etd/ucb/text/Mollow_berkeley_0028E_15181.pdf> SJCP//JG

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. But in calling compassion a cover for narcissism, Edelman may inadvertently point to a connection between compassion and the drive. Freud’s theorization of narcissism, which is a precursor to his idea of the death drive, suggests that although some forms of narcissism can bolster the ego, other forms can do just the opposite. “On Narcissism” posits a distinction between what Freud calls “primary” and “secondary” narcissism; this distinction provides the basis for a contrast that I wish to draw between what could be called primary and secondary pity. To elucidate these two pities, let us look at the tale that Freud tells about two narcissisms. The story begins, as many Freudian narratives do, with the image of a child at its mother’s breast. Freud gives the name “primary narcissism” to the perfect autoerotic pleasure in which the child luxuriates. This pleasure takes place in the absence of a stable self, as the child does not yet conceive of itself as a distinct entity, undifferentiated from its external environment (87-88). It’s the best of times, but it can’t last: the child’s primary narcissism, Freud recounts, is exposed to numerous “disturbances,” ranging from the castration complex (in which boys fear losing the penis and girls, Freud assumes, wish that they had one) to parental discipline and criticism.120 But still, we keep seeking that lost, best time: because humans are “incapable of giving up a satisfaction” that we have “once enjoyed,” we continually try to return to the primary narcissism of childhood. We do this by engaging in secondary narcissism. All the familiar attitudes and behaviors that one tends to think of when one disparages someone as “narcissistic” fall into the category of what Freud defined as secondary narcissism: the puffed up ego, the feeling of superiority over others. But even secondary narcissism, with its many patent problems, does not only aim to aggrandize the ego. The impetus of secondary narcissism, after all, is to return to a state in which the ego as such does not exist. The child’s autoerotic enjoyment at its mother’s breast is pleasurable in part because the child is not yet a subject. As with the death drive’s impulsion to return to “an earlier state of things,” secondary narcissism draws the subject back toward a prior time when the ego did not exist (Beyond 45). Yet if primary narcissism is looked back upon as the best of times, it must, from the vantage point of a fully constituted ego, appear as the worst of times, too. To be drawn back to primary narcissism would be to imagine the abolition of one’s self. For this reason, even though secondary narcissism may threaten to break down the ego, it also entails a defense against the threat/pleasure of that breaking down. Much as the differentiation between the inseparable processes of primary and secondary narcissism rests on a distinction between building up and breaking down the ego, a similar heuristic distinction gives structure to my concepts of primary and secondary pity. To be clear, pity and narcissism are not the same thing: if narcissism can be understood as love of the self, pity involves a complex affective reaction to the suffering of someone else. Primary pity entails a response to the image of another person succumbing to what I have termed the “tragedy of disability.”121 Primary pity arises when one witnesses a fall of the self, a collapse of the ego; such falling is at once painful and pleasurable to observe. In other words, primary pity could be described as a vicarious experience of the tragedy of disability. 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 primarysecondary 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? Indeed, the model of primary pity that I have been constructing may sound a bit too close to sadism for some people’s liking. Pity does come close to sadism, and at the same time, to masochism, which Freud theorizes as sadism’s obverse. In “Mourning and Melancholia,” an essay that can be read as a sequel to “On Narcissism,” Freud approaches a distinction between primary and secondary masochism, which accords with my primary-secondary pity heuristic.122 If the story that I traced in “On Narcissism” could be summarized as “child gets breast; child loses breast; child gets breast back, albeit in a secondary, adulterated form,” the tale that Freud tells about masochism takes much the same form. In this story, subject loves object; subject loses object; and subject tries to get object back by becoming object, that is, by identifying with the object in such a way that object starts to seem—and perhaps in some ways is—part of subject’s self. This last phase is a dysfunctional and disabling form of identification, Freud makes clear. Subject is still angry at object for having left it, and it takes out that anger on the object that is now part of itself. This is the reason that people suffering from melancholia are so hard on themselves, Freud says; the “diminution in…self-regard” that typically accompanies melancholia results from the subject’s attacks on the loved-and-lost object that the subject has incorporated into its ego (“Mourning” 246). Freud had not wanted there to be such a thing as primary masochism; for a long time, he had insisted that sadism, or “aggression,” was the primary instinct, and that masochism was only a turning-inward of this originary aggression. But in “Mourning and Melancholia,” although Freud does not yet use the term “primary masochism,” he nonetheless gets at this concept. The problem of suicide, Freud notes in this essay, raises the possibility that the ego “can treat itself as an object” that it wants to destroy (252). When it comes to such an extreme act as suicide, the possibility of carrying “such a purpose through to execution” must, Freud surmises, involve more than a sadistic wish to punish others. Perhaps, then, there is an innate desire to destroy one’s own self, Freud hypothesizes. If so, this self would not be a single thing: it would be “me” and at the same time, the lost object whose image “I” have internalized. Freud’s notion of a primary masochism is tied very closely to his conceptualization of the drive. Beyond the Pleasure Principle, the text in which Freud first used the term “death drive,” was published three years after “Mourning and Melancholia.” In the later text, Freud’s speculations about the death drive lead him to acknowledge that “there might be such a thing as primary masochism” (66). After all, Freud points out, the idea that either sadism or masochism definitively takes precedence over the other does not ultimately make much sense, as “there is no difference in principle between an instinct turning from the object to the ego and its turning from the ego to an object” (66). If sadism and masochism are ultimately indistinguishable obverses of each other, then pity, in both its primary and its secondary forms, would have to be both sadistic and masochistic. This is a deeply troubling possibility, but I suggest that trying to overcome pity will only make matters worse. There are many ways of trying to overcome primary pity, and each one ultimately aggravates the violence of primary pity. One way is the “pitiless” refusal of compassion that Edelman advocates (70). Another is the disability activist “No pity” injunction. A third example is secondary pity, as in the query, commonly addressed to disabled people, “Have you ever thought of killing yourself?”123 In this question, disabled people correctly hear the wish, “I’d like to kill you.” Indeed, primary pity is so unsettling that our culture has been driven to “mercifully” kill people in the name of secondary pity. We have also been driven to lock people in institutions, to let them languish on the streets, to stare, to punish, and to sentimentalize—all, I would suggest, in the interest of not owning, not naming, not acknowledging that self-shattering, ego-dissolving, instantaneous and intolerable moment of primary pity. Because primary pity is tied up with the disability drive, it must, like the drive itself, be regarded as unrepresentable. However, I will quote at length from a passage of writing that comes close not only to representing primary pity but also perhaps to producing it. In his memoir, One More Theory About Happiness, Paul Guest describes an experience that he had in the hospital after sustaining a spinal cord injury when he was twelve years old: My stomach still roiled and it was hard to keep anything down. Late one night, a doctor came to my bedside, leaning over me, his hands knotted together. He seemed vexed, not quite ready to say anything. Used to the look, I waited. And then he began. “The acids in your stomach, Paul, because of everything you’re going through, it’s like your body, everything about it, is upset. That’s why you feel so nauseous all the time. We’re going to treat that by putting a tube into your nose and down into your stomach, so we can give you medicine, OK?” When he walked away, I felt something begin to give way inside me. Up until then, I’d faced more misery and indignity than I would have thought possible. I lay there, numb and sick in a diaper, helpless. It was too much to bear, too frightening, a last invasion I could experience and not break, utterly. When he returned with nurses, I was already sobbing. Anyone so limited could hardly fight, but I tried. I tried. The neck collar prevented much movement, and any was dangerous, but I turned my head side to side, just slightly, a pitiful, unacceptable range. Fat tears rolled down my face like marbles. I begged them all, no, no, no, please no. “Hold him, hold him still,” the doctor said. Nurses gripped my head on either side. From a sterile pack, the doctor fished out a long transparent tube and dabbed its head in a clear lubricant. He paused almost as if to warn me but then said nothing. 77 Then the tube entered one nostril, its gauge slight enough to pass through, down my throat and into my stomach. I couldn’t thrash or resist. I could only relent. To the pain, the discomfort, but most distressingly the feeling of powerlessness, of violation. It was in that moment, I think, that the weight of everything which had happened fell upon me, undeniably, and the knowledge of it crushed me. (23-24) “Too much to bear,” Guest writes. The word “unbearable” would indeed be an accurate descriptor of this passage: both the experience of violence that it narrates and also the retelling of that experience produce sensations that, as in Berlant and Edelman’s account of sexuality, one cannot bear but must nonetheless “struggle to bear” (back cover). Guest’s account of a nonconsensual administration of an unwanted medical treatment is especially difficult to bear because it gives the reader no recourse to secondary pity: the passage offers no “lesson” to be learned, no invitation to feel “inspired,” nothing to make one feel in any way okay about what has happened. The medical violence that Guest recounts seems particularly devastating because it is readable as sexual: it takes the form of forced penetration, and it results in a “feeling of powerlessness, of violation” that resonates with experiences recounted by survivors of sexual assault.

#### The affirmative’s politics are tied to a rehabilitative futurism where the signifier of the fantasmatic child is placed forward to eradicate and cure disability – this deems the disabled child a threat and excludes disability from the political.

**Mollow 2** Anna (2015): The Disability Drive, 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 <https://digitalassets.lib.berkeley.edu/etd/ucb/text/Mollow_berkeley_0028E_15181.pdf> SJCP//JG

Elsewhere, I have argued that No Future’s impassioned polemic is one that disability studies might take to heart.109 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.110

#### The starting point of the 1AC is epistemically flawed and an independent link – fiat is illusory and anything that doesn’t begin from the question of disability allows for ableism to infiltrate modes of thought which means we’re an epistemic prerequisite. Thus, the role of the ballot is to vote for the debater who best methodologically challenges ableism.

**Campbell 13** Fiona Kumari (2013): Problematizing Vulnerability: Engaging Studies in Ableism and Disability Jurisprudence, Fiona Kumari Campbell undertakes research in Studies in Ableism, coloniality, disability studies as well as explorations about Buddhist formations of disability. Trained in sociology, theology and legal studies; she is interested in ways that law, new technologies and the governance of marginal populations produces understandings of the productive citizen, normative bodies, ideas of periphery and ways that ablement privileges and entitles certain groups in society. Campbell is the author of Contours of Ableism: The Production of Disability and Abledness (Palgrave, 2009) and numerous other journal articles and book chapters. SJCP//JG

Studies in Ableism What is meant by the concept of ableism? The literature suggests that the term is often used fluidly with limited definitional or conceptual specificity. The work of Carlson (2001)5 and Campbell (2001) represented a turning point in bringing attention to this new site of subordination not just in terms of disablement but also ableism’s application to other devalued groups. Ableism is deeply seeded at the level of knowledge systems of life, personhood and liveability. Ableism is not just a matter of ignorance or negative attitudes towards disabled people; it is a schema of perfection, a deep way of thinking about bodies, wholeness and permeability.6 As such integrating ableism into social research and advocacy strategies represents a significant challenge to practice as ableism moves beyond the more familiar territory of social inclusion and usual indices of exclusion to the very divisions of life. Bringing together the study of existence and knowledge systems, ableism is difficult to pin down. Ableism is a set of processes and practices that arise and decline through sequences of causal convergences influenced by the elements of time, space, bodily inflections and circumstance. Ability and the corresponding notion of ableism are intertwined. Compulsory ablebodiedness is implicated in the very foundations of social theory, therapeutic jurisprudence, advocacy, medicine and law; or in the mappings of human anatomy. Summarised by Campbell (2001, 44) Ableism refers to; …A network of beliefs processes and practices that produces a particular kind of self and body (the bodily standard) that is projected as the perfect, speciestypical and therefore essential and fully human. Disability then is cast as a diminished state of being human. Writing today (2013) I add an addition to this definition: ‘The ableist bodily configuration is immutable, permanent and laden with qualities of perfectionism or the enhancement imperative orientated towards a self-contained improvability’. Sentiency applies to not just the human but the ‘animal’ world. As a category to differentiate the normal from the pathological, the concept of abledness is predicated on some preexisting notion about the nature of typical species functioning that is beyond culture and historical context. Ableism does not just stop at propagating what is typical for each species. An ableist imaginary tells us what a healthy body means – a normal mind, the pace, the tenor of thinking and the kinds of emotions and affect that are suitable to express. Of course these ‘fictional’ characteristics then are promoted as a natural ideal. This abled imaginary relies upon the existence of an unacknowledged imagined shared community of able-bodied/minded people held together by a common ableist world view that asserts the preferability and compulsoriness of the norms of ableism. Such ableist schemas erase differences in the ways humans express our emotions, use our thinking and bodies in different cultures and in different situations. This in turn enacts bodily Otherness rendered sometimes as the ‘disabled’, ‘perverted’ or ‘abnormal body’, clearly demarcating the boundaries of normal and pathological. A critical feature of an ableist orientation is a belief that impairment or disability is inherently negative and at its essence is a form of harm in need of improvement, cure or indeed eradication.

#### Vote negative to endorse an unwavering pessimism and radical failure – we reject the political and notions of futurism in exchange for an affirmation of disability’s abjection as something beautiful.

**Selck 16** Michael (2016): Crip Pessimism: The Language of Dis/ability and the Culture that Isn't, Southern Illinois University Carbondale, SJCP//JG

The disabled are dying and with them dis/abled culture is being eradicated. In the time between formulating this project and its completion already too many disabled souls have been taken from this world, including pivotal disability studies influences for this research. I barely had enough time to mourn the loss of disability advocate and inspiration porn critic Stella Young before grieving the loss of disability studies exemplar Tobin Siebers. Attached to the grief I feel as a result of the fading disability studies community is the perpetual grief I harbor since my disabled Father’s suicide and in turn the grief concomitant to the claiming of a disabled identity. I choose to start out this project with grief because it communicates the tenor of this research; this is not the disability studies project of inspiration or utopia. My entry point to the disability studies dialogue is riddled with grief, anger, and pain and it is as such that this project plots a course of disability research that attempts to make a space free from the ideological constraints of optimism. The language surrounding dis/ability is highly political. Entire words, phrases, and identities are stretched between, in, and out of the nexus of dis/ability. The choice, for instance, to include a backslash in the word dis/ability represents for Goodley (2014) a desire to delineate and expand each of the categories in the face of global neoliberalism. My initial research inquired about the impact of dis/abled terms and phrases. I went to interrogate rhetoric like “special education”, “handicapable”, and one of the most glaringly overused insults in the American education system “retard”. The scholarship I was coming up with was plentiful but was for the most part located entirely outside of intercultural communication programs like the one I was attending. For the most part the few and far between intercultural communication projects about dis/ability I was able to locate were without modal complexity and didn’t bear semblance to so many of my own experiences. I was beginning to notice a layer of optimism that has been communicatively imprinted upon the negotiation of dis/abled identity. The angst started to manifest as I questioned if I was in the correct field or if dis/ability even was ‘cultural’. I felt a very real cultural erasure of dis/ability in academia and ultimately that glaring lack of consideration is what pushed me to performance studies. I first worked to close the apparent research gap by crafting a collaborative performance titled Under the Mantle (UTM), which put dis/ability, communication scholarship, and pessimist philosophy on stage. The larger purpose of this research report is to antagonize the erasure of dis/ability from communication studies by autoethnographically analyzing the crip-pessimist performance art project Under The Mantle. This research report will first detail the components of the theoretical work that was drawn on to create UTM. Next I offer a literature review to demonstrate the combination of optimism and neglect dis/ability has undergone in intercultural communication models. Following that section I mark my shift to performance methods as I explain how narrative autoethnography can illuminate cultural misconceptions regarding the dis/abled. In the last sections of this report I offer a textual analysis of the performance UTM and analyze three significant arguments of the instillation before concluding. Contextualizing Critical Dis/Ability Theory Often used interchangeably, critical disability theory (CDT) and critical disability studies (CDS) contest dis/ablism (Goodley, 2011, 2014; Devlin & Pothier, 2006; Hosking, 2008). There are several unique additions made to CDS with every new instantiation. Scholars in European countries and Canada attend to the theory, with United States academics often underrepresented. There are three concurrent themes of CDT that I will synthesize in this section with some dis/ability studies authors claiming there are as many as seven themes of CDT (Hosking, 2008). In the introduction to their edited collection of dis/ability essays, Richard Devlin and Dianne Pothier (2006) present three themes of CDT as, first, to highlight the unequal status to which persons with disabilities are confined; second, to destabilize necessitarian assumptions that reinforce the marginalization of persons with disabilities; and third, to help generate the individual and collective practical agency of persons with disabilities in the struggles for recognition and redistribution. (p. 18, emphasis mine) Already the connections between the CDT and the critical communication paradigm are visible as each respectively forefronts notions of power, privilege, identity, and agency. Outlined in more detail, the first theme of CDT argues that there is systemic micro and macro level discrimination against bodies with disabilities. To some critical communication scholars, this theme might be obvious, but it seldom is when “the resulting exclusion of those who do not fit able-bodied norms may not be noticeable or even intelligible” (Delvin & Pothier, 2006, p. 7). As the bumper sticker on my laptop proudly disclaims, “Not all disabilities are visible,” which necessarily adds a level of nuance and complexity to the way that dis/ability studies attend to the prospect of discrimination and violence. Often times, “social organization according to able-bodied norms is just taken as natural, normal, inevitable, necessary, even progress” (Delvin & Pothier, 2006, p. 7). It might be true that the lack of collaborative work between critical communication studies and dis/ability studies is because neoliberalism is supremely effective at rebranding marginalized oppression as a marker of its progress. The implications of this assertion are dire but essential to the basis of crip-pessimism. Theoretical approaches based in pessimism and skepticism are often necessary to distinguish the instruments of self destruction that have been mistaken for those of self betterment. Thus, a key question remains, what is regarded as progress and to whom does it count? The politics of progress call for the second tenet of CDT, which is a destabilization of neoliberal practices that strip power and agency from bodies with disabilities. Devlin and Pothier (2006) use the language of “anti-necessitarian” (p. 2), which refers to the efficacy of social organizations and an unflinching skepticism of liberalism. For Shildrick and Price (1999), “disabled bodies call into question the ‘giveness’ of the ‘natural body’ and, instead, posit a corporeality that is fluid in its investments and meanings” (p. 1). Anti-necessitarian logics ask questions that remain innocuous to the critical communication paradigm. Can the architectural proliferation of stairs and multiple levels on buildings be attributed to neoliberalism and active disablism? If stairs seem to focus too exclusively on physical impairments, then what about the sensitivity of the building’s lighting, acoustics, and spatiality? Finally, if neoliberalism fights to protect its grand narrative of progress then is the social exclusion of bodies with disabilities necessary for the day-to-day operation of our globalized world? As Donaldson (2002) posits: “theories of gendered, raced, sexed, classed, and disabled bodies offer us critical languages for ‘denaturalising’ impairment’” (p. 112) at the level of the subjective and inter-subjective. The third theme of CDT is to attend to the agency of bodies with disabilities in the struggle for recognition. One key element of extending agency to the disabled is the use of social experience. Experience is subjective “but experience remains intimately connected to political and social existence, and therefore individuals and societies are capable of learning from their experiences” (Siebers, 2008, p. 82). Though absolutely necessary, it is not enough to write treatises on the oppression of the disabled over time. Academics, theorists, intercultural trainers, and storytellers alike should be aware of the constant risks of representation. Representation and context are at the core of critical disability studies. The notion of agency is as unstable as the notions of dis/ability. There is no one-size-fits-all human rights based approach that will be suitable to address all disabled experiences, as the theoretical call for crip-pessimism will remind us. Instead of a universal abstract Rawlsian concept of social justice, CDS “attend(s) to the relational components of dis/ablism” (Goodley, 2011, p. 159). By a Rawlsian concept of social justice I mean a model that relies on distributive justice with utopist equality at its core. Where utopist equality projects highlight human sameness to the point of purity. CDT unavoidably invites a discussion about difference into the folds as postmodern and post-structural thinkers position the self as defined constantly in relation to others. Therein lies the difference between an equality model and a justice model of social identity. Often in the attempt to open up spaces for reconsidering self and other, CDS celebrates disability as a positive identity marker. This essay offers a strong argument of caution that the inclusion of CDS in critical communication studies might rely too heavily on celebrations of disabled identity. Nothing better demonstrates that reliance on celebrating identity than the myriad language choices used to describe a disabled identity including: differently-abled, special needs, person with disability, disabled person, temporarily able-bodied, and others. Often, able- bodied audiences have a tendency to sensationalize the presence of disability in a space that has not traditionally welcomed it. Examples of this are highlighted by the increasingly popular discussion of ‘inspiration porn’ (Young, 2014) and Hollywood’s representation of disability. The tendency is to inspirationalize the disabled for achieving tasks that would not be celebrated if they were accomplished by an unimpaired body. Crossing the street, showing up on time, entering a building by oneself are all tasks profoundly routine to the non-disabled and yet simultaneously cherished as markers of progress for the disabled. Philosophical pessimism is articulated next as a way to temper the risk of sensationalizing dis/ability. The theories ultimately fuse together like orchids and wasps to generate the larger theme of crip-pessimism. Philosophical Pessimism Throughout the 19th century pessimism was one of the most popular intellectual and philosophical strains, crossing countries and continents. Authors such as Rousseau, Leopardi, Schopenhauer, and Nietzsche overwhelmingly created and lead the spirit of pessimism. Contemporarily however, the word ‘pessimism’ is pejorative and describes a body’s emotional discontent rather than intellectual engagement with the world. Dienstag (2009) writes, “Since pessimism is perceived more as a disposition than as a theory, pessimists are seen primarily as dissenters from whatever the prevailing consensus of their time happens to be, rather than as constituting a continuous alternative” (p. 3). Power is responsible for ontological shifts, and during shifts some populations benefit while others are harmed. The turn in thinking about pessimism from an intellectual position to an emotional state has been particularly gratuitous for bodies with disabilities. I come to pessimism because of my experience with disability. My anxiety disorder comes with an exteriority of anti-social behavior that has branded me pessimistic. The concern for my anxiety in public situations is often commented on as overly critical, negative, narcissistic, and most often pessimistic. I experience an anxious state of becoming different, and after years of failing to rehabilitate my sameness to able-bodied standards, I have come to a comfort with pessimism. I choose to include pessimism as a theoretical crutch to avoid communication studies’ sensationalism of disability. I imagine that when critical communication studies does bridge the dis/ability research gap that it might, at least initially, extend some neoliberal logics at the expense of CDS. This might manifest by scholars simply asserting disabled personhood where it does not institutionally, culturally, or individually exist. I find that CDT and philosophical pessimism combine in unique and valuable ways, particularly around tensions of personhood, abstract ideal humanism, and neoliberalism. Neoliberalism should be understood as “the superiority of individualized, market-based competition over other modes of organization. This basic principle is the hallmark of neo-liberal thought— one with old roots that lay partly in Anglo economics and partly in German schools of liberalism” (Mudge, 2008, p. 706-707). There are four components of pessimism outlined by Joshua Foa Dienstag (2006) in his book Pessimism: Philosophy, Ethic, Spirit that I wish to explore difference through. They are as following that: (1) time is a burden, (2) history is ironic, (3) human existence is absurd, and finally (4) resignation or affirmation. To write about pessimism necessarily involves questions of time, temporality, and history. The development of philosophical pessimism, specifically, the theories regarding the burden of time-consciousness, begins with difference. For the pessimist, the concept of time begets a differentiation between human and animal. Being a dog-owner myself, I have heard the colloquial aphorism that dogs, as all animals, have no concept of time. Pessimists understand time consciousness as a unique, but ultimately loathsome, trait of the human condition. Even in projects that appear to be geared toward sameness there are always unperceived and neglected populations. For example, even the U.S. constitution alleges persons of color were (and still are often) racially subjugated as property instead of considered to be fully human. The notion of difference is at the center of the pessimist’s position on time-consciousness because the philosophy accepts that the conditions of our existence are subject to relentless unpredictable change. “To the pessimists, however, the human condition is existentially unique— its uniqueness consisting precisely in the capacity for time-consciousness” (Dienstag, 2009, p. 20). For the pessimist nothing is ever the same, everything is always different, and to inhabit linear time means that everything in existence is always rushing off into the past. The advent of human time consciousness is also what leads the pessimist to find the course of history to be ironic. History is ironic for the pessimist because progress is always related to a greater set of unperceived consequences. As suggested above, philosophical pessimism acknowledges that change occurs; technologies develop and improve over time. Pessimists ask if those improvements are related to a greater set of costs that are not immediately recognizable. (Dienstag, 2006, p. 25) Similar to critical disability theory, pessimism interrogates power and privilege. Pessimists rely on the logic of difference to chart consequences. Consequences go unperceived because they occur across populations with disproportionate access to power, populations that are often culturally unintelligible. For instance, the massive boom in mobile technologies like cell phones and laptops has created vast pits of ‘e-waste’ in Africa, surges in child labor, and conflict over rare earth minerals (Vidal, 2013). Pessimists use difference to tease out the distinction between the instruments of suffering and those of betterment. The third philosophical pessimistic position is that human existence is absurd. The absurdity of existence “is illustrated by the persistent mismatch between human purposes and the means available to achieve them: or again, between our desire for happiness and our capacity to encounter or sustain it” (Dienstag, 2006, p. 32). Difference is built upon exanimations of power, which is both fluid and transferable but ultimately permanent. Classical western philosophy has an optimistic pragmatism built into it that posits there must be an answer to our questions. Alternatively, the pessimist embraces uncertainty, ambiguity, and intersubjectivity. Pessimism encourages a sense of comfort around the idea of multiple, coexistent, and perhaps competing histories. Neoliberal optimism is the logic of conflict as materially reconcilable, rather than antagonistically irreconcilable. The fourth and final tenet of pessimism that we are to examine asks what we are to do about our dire human condition. There are multiplicities of rationales that ultimately inform the pessimistic dualism to either resign from life or affirm it entirely. I defer to an existential or Nietzschean pessimism that recognizes suffering is inevitable for two reasons. First, human time-consciousness necessitates an awareness of our impending death. Second, mutually assured value systems will always intersubjectively exist. The choice to affirm life in its entirety is a pessimistic choice. Embracing life as both miserable and beautiful, fleeting and enduring, validates the perpetually fragmented subject seeking a world that exists beyond good and evil and instead just is.

## 3

#### Counterplan: the Appropriation of outer space by Starlink, OneWeb, and Telesat via Large Satellite Constellations in Lower Earth Orbit is unjust

#### Solves case- every card is overwhelmingly about Starlink

#### Avoids the link to the DA- we still keep independent African Satellites

#### Independent African satellite constellation key to push out foreign, Chinese investment – which kills African democracy

Tuerk 20 Tuerk, Miriam. CEO and cofounder of Clear Blue Technologies Inc."Africa Is The Next Frontier For The Internet." Forbes, 8 June 2020, www.forbes.com/sites/miriamtuerk/2020/06/09/africa-is-the-next-frontier-for-the-internet/?sh=1f5e9eec4900.

Expanding network connectivity across sub-Saharan Africa will open up digital services that many of us now take for granted. Mobile Banking, Whatsapp Chatting and video, e-health, e-education are key services only possible with reliable internet connectivity. For a geographically disparate population, it will mean greater access to essential services, including e-agri services. There are hugely populous cities in sub-Saharan Africa – Lagos in Nigeria is one of the fastest growing cities in the world – but even in the center on Victoria Island, the internet connection can be patchy and face frequent outages. For those populations, access to the internet means being able to save, invest and borrow money, getting an education, having access to basic healthcare, and being able to trade with bigger markets; are all fundamental to socioeconomic advancement. That has been a powerful force fueling economic growth over the past century across Europe, North America and Asia. The Demand Is There There is a lot of pent-up demand for internet services in sub-Saharan Africa. Indeed, a substantial portion of mobile phones have internet and messaging capabilities. Mobile usage in sub-Saharan is more widespread than electricity – in 2016, The Economist found that while less than half the population has access to electricity, two-fifths own a mobile phone. In a Pew Research survey of six sub-Saharan Africa countries, a median of 41% used the internet occasionally or had access to an internet-capable smartphone – that compares to 89% of Americans. Digital innovations have also taken off quickly in sub-Saharan Africa, partly because the younger demographic is more ready for adoption of new technologies. Compared to aging populations in developed countries, the median age in Africa is 19.2 years old. In a study by Pew Research, it notes that adults younger than 30 in six sub-Saharan African countries are more likely to use the Internet, echoing trends seen elsewhere. We’ve seen this in the quick adoption of digital technologies. Safaricom, Kenya’s largest telecom operator, has seen widespread adoption of its mobile payment app, M-Pesa, since it was launched in 2007. The app now has 24.5 million users, representing over 70% of the mobile money market in Kenya, and can be used to send and receive funds via SMS without having a bank account. The Supply Is Growing, But Still Faces Bottlenecks There are a number of mobile carriers now seeking to expand network coverage in Africa, especially in rural areas. Governments are pushing for these infrastructure roll outs as they recognize that communications and renewable energy are two key tenets of development for their countries. Telecom technology over the past decade has advanced significantly, with specialized product development to address the needs of Rural telecom particularly in terms of the off-grid renewable energy, resilience to extreme temperatures, and software driven base stations meaning that masts can placed almost anywhere. The wider need for infrastructure development in telecom and renewable energy is well recognized. The African Development Bank (AfDB) estimates that the continent of Africa will need investment of at least US$130 billion to $170 billion annually. In recent years, the majority of that capital investment into African infrastructure has come from China – foreign direct investment from China has grown 40% annually over the past decade, and it could be even higher, dwarfing investment from other economic partners, including the U.S. ZAMBIA CHINA A pedestrian runs past a Huawei Technologies Co. mural painted on a wall in Lusaka, Zambia, on ... [+] © 2018 Bloomberg Finance LP Huawei, ZTE and China Telecom CHA 0.0% have all made in-roads into the region. Huawei recently announced that it was launching a 5G transport network with Rain in South Africa, the first network operator in the country to deploy 5G. Huawei’s growth in the region has raised concerns that it could be used for surveillance; The Wall Street Journal reported last year that technicians from the company helped African governments to spy on their political opponents. At the same time, Western companies such as Vanu and Parallel Wireless are developing innovative solutions and products. While growth in technology is overall a good thing for society, it cannot come at the cost of democracy. Western governments need to do more to invest in African telecoms to secure the future of this region and our economic relationships with it.

#### Expansion in Africa escalates absent democratic relations

Maru 19 - a scholar of peace and security, law and governance, strategy and management, human rights and migration issues. (Mehari, “A new cold war in Africa” Aljazeera. July 1, 2019. DOA: November 17, 2019. https://www.aljazeera.com/indepth/opinion/cold-war-africa-190630102044847.html)//MGalian

Increasing tensions between China and the US will be detrimental to African prosperity and peace. Last week, the 12th US-Africa Business Summit, a high-level event attended by 11 African heads of state and government and some 1,000 business leaders, was held in Maputo, Mozambique. During the three-day event, US officials unveiled a $60bn investment agency which will seek to invest in low and middle-income countries, with a special focus on Africa. The announcement came six months after National Security Advisor John Bolton presented the Trump administration's "New Africa Strategy". According to the document: "Great power competitors, namely China and Russia, are rapidly expanding their financial and political influence across Africa. They are deliberately and aggressively targeting their investments in the region to gain a competitive advantage over the United States." Although both China and Russia are mentioned, over the past few months, the US has demonstrated that it is mainly concerned about the former. In fact, it already appears that Africa is set to become yet another battleground for the escalating trade war between Beijing and Washington. With increasing foreign military presence and growing diplomatic tensions, the continent is already witnessing the first signs of an emerging new cold war. And just like the previous one devastated Africa, fuelling wars and forcing African governments to make economic choices not in their best interests, this one will also be detrimental to African development and peace. Economic war China's approach to Africa has always been trade oriented. The continent became one of the top destinations for Chinese investment after Beijing introduced the so-called "Go Out" policy in 1999 which encouraged private and state-owned business to seek economic opportunities abroad. As a result, Chinese trade with Africa has increased 40-fold over the past two decades; in 2017, it stood at $140bn. Between 2003 and 2017, Chinese foreign direct investment (FDI) flows have also jumped more close to 60-fold to $4bn a year; FDI stocks stand at $43bn - a significant part of which has gone to infrastructure and energy projects. China has significantly expanded African railways, investing in various projects in Kenya, Ethiopia, Djibouti, Angola and Nigeria; it is currently building a massive hydropower plant in Angola and have built Africa's longest railway connecting Ethiopia and Djibouti; it has built the headquarters of the African Union in Addis Ababa and the West African regional bloc ECOWAS in Abuja. By contrast, for a long time the US has viewed Africa as a battlefield where it can confront its enemies, whether the Soviets during the Cold War, terrorists after 9/11 or now the Chinese. Washington has never really made a concerted effort to develop its economic relations with the continent. As a result, trade between the US and Africa has decreased from $120bn in 2012 to just over $50bn today. US FDI flows have also slumped from $9.4bn in 2009 to around $330m in 2017. The new $60bn investment fund announced last week is a welcome initiative from the US but it will not be able to challenge Chinese economic presence on the continent. Just last year Chinese President Xi Jinping pledged $60bn too but dedicated it solely to investment in Africa. The US has repeatedly accused China of using "debt to hold states in Africa captive to [its] wishes and demands" and has warned African states to avoid Chinese "debt diplomacy" which is supposedly incompatible with the independence of African nations and civil society and poses "a significant threat to US national security interests". Yet, Africa is only the fourth-biggest recipient of Chinese FDI after Europe (mainly Germany, UK and Netherlands), the Americas (mainly the US and Canada), and Asia. The US has also borrowed heavily from China; currently its debt to its rival stands at $1.12 trillion. By contrast, Africa owes China around $83bn. Africans are fully aware of and concerned about high indebtedness, trade imbalances, the relatively poor quality of Chinese goods and services and Beijing's application of lower standards of labour and environmental practices. But many do not share the American perspective that their economic relationship with China is to their detriment and rather see it as an opportunity that provides much-needed unconditional funding and that takes into account local priorities. As Djibouti's President Ismail Omar Guelleh has pointed out, "The reality is that no one but the Chinese offers a long-term partnership." The pressure the US is currently exerting on African countries to move away from partnerships with China could hurt African economies. It could force African countries into making choices that are not in their best economic interests and miss out on important development projects or funding. Meanwhile, the US-China trade war is already affecting the continent. According to the African Development Bank, it could cause as much as a 2.5 percent decrease in GDP for resource-intensive African economies and a 1.9 percent dip for oil-exporting countries. Militarisation The escalating tensions between the US and China could also end up threatening the security of the continent**.** Both countries are militarily involved in Africa. Over the past 15 years, the Chinese People's Liberation Army has been engaged in a number of security missions across the continent, making modest auxiliary troop contributions to peacekeeping operations in Sudan, South Sudan, Liberia, Mali and the Democratic Republic of Congo. It has also contributed millions of dollars of peacekeeping equipment to the African Union Mission in Somalia and provided significant funding to the Intergovernmental Authority on Development for its mediation in South Sudan. In 2017, the first Chinese overseas military base was opened in Djibouti. The facility, which currently hosts some 400 staff and troops, and has the capacity to accommodate 10,000, is officially supposed to provide support for the ongoing anti-piracy operations of the Chinese navy, but it also plays a role in securing maritime routes, part of the Belt and Road Initiative. There has also been speculation that this is the first of a number of planned bases meant to secure Chinese interests in Africa. China's military presence in Africa, however, pales in comparison to that of the US. Over the past few years, US Africa Command has run some 36 different military operations in 13 African countries, including Burkina Faso, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Kenya, Libya, Mali, Mauritania, Niger, Somalia, South Sudan and Tunisia. It has more than 7,000 troops deployed on the continent. It has a large base in Djibouti - the biggest and only permanent US military base in Africa - but it also runs at least 34 other military outposts scattered across the west, east and north of the continent where US troops are deployed and military operations (including drone attacks) are launched from. The US also directly supports the armies of Egypt, Nigeria, Ethiopia, Mali, Niger and others as well as the G5 Sahel force tasked with counterterrorism. While a direct confrontation between US and Chinese forces in Africa is unlikely, their growing presence is becoming an increasingly destabilising factor. Already Washington's strategy to contain Chinese influence over Africa is playing out at different conflict and social upheaval hotspots across the continent. The fallout of the US-Chinese competition is particularly apparent in the strategic Red Sea region, through which passes one of the most important maritime routes. Countries in the region are not only feeling growing US and Chinese pressure to take one side or the other, but are also increasingly exposed to outside interference by various regional powers. Growing regional tensions Djibouti has recently found itself at the centre of US-Chinese diplomatic confrontation. Being a host to military bases of both superpowers, the small country has had to play a difficult balancing game. In 2018, Djibouti seized control of its Doraleh Container Terminal from the Emirati company DP World, claiming its operation of the facility was threatening its sovereignty. The Djibouti authorities had feared that the UAE's investment in the nearby Port of Berbera in the autonomous Somali region of Somaliland could challenge its position as the main maritime hub for Ethiopia's large economy. Its decision to terminate the contract with DP World, however, triggered a sharp reaction from Washington, a close Emirati ally. The Trump administration fears that Djibouti could hand over control of the terminal to China. Bolton has warned: "Should this occur, the balance of power in the Horn of Africa - astride major arteries of maritime trade between Europe, the Middle East, and South Asia - would shift in favour of China. And, our US military personnel at Camp Lemonnier could face even further challenges in their efforts to protect the American people." Djibouti was forced to declare publicly that it would not allow China to take over the terminal but that has not assuaged US fears. Ever since, the US sought to secure a possible alternative location for its African military base: neighbouring Eritrea. It encouraged regional actors, including Saudi Arabia and the UAE, to pull Eritrea out of its decades-long isolation. In a matter of months, long-time enemies Ethiopia and Eritrea concluded a peace agreement to end their 20-year-old cold conflict, while the UN lifted sanctions on Asmara. As a result, Eritrea could emerge as a strategic rival to Djibouti, offering its coast for foreign military and economic facilities. The UAE, for example, has already set up a military base near the port of Assab. Sudan, to the north, has also been the battleground of the ongoing superpower turf war. China had been a long-term supporter of President Omar al-Bashir. Under his rule, Beijing came to dominate its oil industry, buying some 80 percent of its oil and thus providing Khartoum with much-needed cash to wage war against various rebel groups. It was also one of the few countries, along with Russia, that would break the UN arms embargo and sell weapons to al-Bashir's regime. After South Sudan gained independence in 2011, China continued to be a close partner of the Sudanese regime, remaining its main trading partner. Sudan in fact became the biggest beneficiary of the $60bn Africa investment package China pledged in 2018, having some $10bn in Chinese debt written off. The Chinese government also made a lot of plans to develop facilities in Port Sudan, where it already operates an oil terminal. Qatar and Turkey also signed deals with al-Bashir for various facilities in the port city. When mass protests erupted in December last year, Beijing stood by al-Bashir, who it saw as the main guarantor of stability in the country, which falls on strategic routes, part of its Belt and Road Initiative. Meanwhile, the US had repeatedly demonstrated that it did not want al-Bashir running for another term. His removal was approved in Washington, which has since appeared to back the interests of Saudi Arabia and the UAE in the country. The two Gulf states currently hope to install another strongman sympathetic to their regional politics, who would maintain Sudan's participation in the war in Yemen and curb Turkish and Qatari influence. At this point, it seems China is at risk of being sidelined by the significant sway the UAE and Saudi Arabia have with Sudan's Transitional Military Council (TMC). Apart from Djibouti and Sudan, various other countries in the region have felt the consequences of the US bid to contain China. This political confrontation has also added to the already rising tensions between other players in the region, including Egypt, Gulf countries, Iran and Turkey. The Trump administration has particularly favoured Emirati, Saudi and Egyptian interests which have emboldened these three countries in their efforts to shape regional dynamics to their advantage. Thus, in the long-term, given the pre-existing faultlines and conflicts in the region, the US-China cold war could have a detrimental effect, not only on its economy but also on its security. At this point, to preserve its interests and its peace, Africa has only one option: to reject pressures to swear allegiance to either of the two powers. African countries should uphold their sovereignty in policy and decision-making and pursue the course that is in the best interests of their nations. If the US wants to compete with China on the continent, it should do so in good faith. It can gain a competitive advantage by offering African countries better, more credible and principled alternatives to those put forward by China. But that can only happen if the US develops a strategy that focuses on Africa itself, not on containing and undermining the business of a third party.

#### Instability causes global war

**Mead 13** – (Walter Russell, Foreign Affairs Prof @ Bard, “Peace In The Congo? Why The World Should Care”, American Interest; http://www.the-american-interest.com/2013/12/15/peace-in-the-congo-why-the-world-should-care/)

The Congo war should be a reminder to us all that the foundations of our world are **dynamite**, and that the potential for **new conflicts** on the scale of the **horrific** **wars of the 20th century** is very much **with us** **today.** The second lesson from this conflict stems from the realization of how much patience and commitment from the international community (which in this case included the Atlantic democracies and a coalition of African states working as individual countries and through various international institutions) it has taken to get this far towards peace. Particularly at a time when many Americans want the US to turn inwards, there are people who make the argument that it is really none of America’s business to invest time and energy in the often thankless task of solving these conflicts. That might be an ugly but defensible position if we didn’t live in such a tinderbox world. Someone could rationally say, yes, it’s terrible that a million plus people are being killed overseas in a horrific conflict, but the war is really very far away and America has urgent needs at home and we should husband the resources we have available for foreign policy on things that have more power to affect us directly. The problem is that **these wars spread**. They may start in places that we don’t care much about (most Americans didn’t give a rat’s patootie about whether Germany controlled the Sudetenland in 1938 or Danzig in 1939) but they tend to **spread to places** that we do care **very much about**. This can be because a revisionist great power like Germany in 1938-39 needs to overturn the balance of power in Europe to achieve its goals, or it can be because instability in a **very remote place** triggers problems in places that we **care about** very much. Out of Afghanistan in 2001 came both 9/11 and the waves of insurgency and instability that threaten to rip nuclear-armed Pakistan apart or trigger wider conflict with India. Out of the mess in Syria a witches’ brew of terrorism and religious conflict looks set to complicate the security of our allies in Europe and the Middle East and even the security of the oil supply on which the world economy so profoundly depends. Africa, and the potential for upheaval there, is **of** **more** **importance** to American security than many people may **understand**. The line between **Africa and the Middle** **East is** a **soft** one. The weak states that straddle the **southern approaches** of the Sahara are **ideal petri dishes** for **A**l **Q**aeda **type groups** to form and attract local support. There are networks of funding and religious contact that give groups in these countries potential **access to funds**, **fighters**, **training** and **weapons** from the Middle East. A war in the eastern Congo might not directly trigger these other conflicts, but it helps to **create the swirling underworld** of **arms trading**, **money transfers**, **illegal commerce** and the rise of a generation of young men who become experienced fighters—and know no other way to make a living. It destabilizes the environment for neighboring states (like Uganda and Kenya) that play much more direct role in potential crises of greater concern to us. This is why the Clinton, Bush and Obama administrations (representing three very different kinds of American politics) have all been engaged in efforts like the peace keeping effort in the Congo. It is why, despite our budget problems at home and despite our often justifiable impatience with the complexities of dealing with international coalitions and the inadequacies of international institutions, we need to continue the slow and painstaking work that makes agreements like this one possible. The world we live in is an **explosive** one. There are **all kinds of things that can go horribly wrong**, and what happens in one corner of the world doesn’t necessarily stay there. Reducing the danger requires an active, global American foreign policy whether we like it or not. The potential for new communal and religious wars that kill millions of people and endanger American security and world peace is very real. The world seems safer than the world of the 1930s and 1940s in part because the United States and many of our friends and allies are working quietly around the world to contain outbreaks of violence, address the issues that exacerbate hatred and distrust, and in the last analysis are willing to provide the security guarantees and deterrents that prevent mass mayhem.

## Case

AT Weber

[1] Localized level of politics fails

[2] Reading K is good

AT Lake

[1] What is progress

[2] Not omission – actively violent

AT DeBoer

[1] Not a revolution

We contrl how fw operates

### Defense – No Extinction

#### AT Edwards

[1] No weighing – just says good models than 20 years ago

[2] Just says a lot of people would die – dinosaurs died but tiehr species survived, also does’t assume adaptation

#### No extinction – this card assumes all of your warrants

Wigner et al. 14, Eugene P. Wigner was a Professor of Mathematical Physics at Princeton University and was a Nobel Laureate. Cresson Kearny was a civil defense researcher at the Hudson Institute, a US Army Major and Legion of Merit recipient, had a degree in Civil Engineering from Princeton University, and had two degrees in Geology from Oxford University. Arnold Jagt is a systems engineer and content digitizer. (“Ch. 1: The Dangers from Nuclear Weapons: Myths and Facts”, http://www.oism.org/nwss/s73p912.htm, Updated on 11/29/2014, Originally published in 2004) Kerwin

An all-out nuclear war between Russia and the United States would be the worst catastrophe in history, a tragedy so huge it is difficult to comprehend. Even so, it would be far from the end of human life on earth. The dangers from nuclear weapons have been distorted and exaggerated, for varied reasons. These exaggerations have become demoralizing myths, believed by millions of Americans. While working with hundreds of Americans building expedient shelters and life-support equipment, I have found that many people at first see no sense in talking about details of survival skills. Those who hold exaggerated beliefs about the dangers from nuclear weapons must first be convinced that nuclear war would not inevitably be the end of them and everything worthwhile. Only after they have begun to question the truth of these myths do they become interested, under normal peacetime conditions, in acquiring nuclear war survival skills. Therefore, before giving detailed instructions for making and using survival equipment, we will examine the most harmful of the myths about nuclear war dangers, along with some of the grim facts. ° Myth: Fallout radiation from a nuclear war would poison the air and all parts of the environment. It would kill everyone. (This is the demoralizing message of On the Beach and many similar pseudoscientific books and articles.) ° Facts: When a nuclear weapon explodes near enough to the ground for its fireball to touch the ground, it forms a crater. (See Fig. 1.1.) Fig. 1.1. A surface burst. In a surface or near-surface burst, the fireball touches the ground and blasts a crater. ORNL-DWG 786264 Book Page: 12 Many thousands of tons of earth from the crater of a large explosion are pulverized into trillions of particles. These particles are contaminated by radioactive atoms produced by the nuclear explosion. Thousands of tons of the particles are carried up into a mushroom-shaped cloud, miles above the earth. These radioactive particles then fall out of the mushroom cloud, or out of the dispersing cloud of particles blown by the winds thus becoming fallout. Each contaminated particle continuously gives off invisible radiation, much like a tiny X-ray machine while in the mushroom cloud, while descending, and after having fallen to earth. The descending radioactive particles are carried by the winds like the sand and dust particles of a miles-thick sandstorm cloud except that they usually are blown at lower speeds and in many areas the particles are so far apart that no cloud is seen. The largest, heaviest fallout particles reach the ground first, in locations close to the explosion. Many smaller particles are carried by the winds for tens to thousands of miles before falling to earth. At any one place where fallout from a single explosion is being deposited on the ground in concentrations high enough to require the use of shelters, deposition will be completed within a few hours. The smallest fallout particles those tiny enough to be inhaled into a person's lungs are invisible to the naked eye. These tiny particles would fall so slowly from the four-mile or greater heights to which they would be injected by currently deployed Soviet warheads that most would remain airborne for weeks to years before reaching the ground. By that time their extremely wide dispersal and radioactive decay would make them much less dangerous. Only where such tiny particles are promptly brought to earth by rain- outs or snow-outs in scattered "hot spots," and later dried and blown about by the winds, would these invisible particles constitute a long-term and relatively minor post-attack danger. The air in properly designed fallout shelters, even those without air filters, is free of radioactive particles and safe to breathe except in a few' rare environments as will be explained later. Fortunately for all living things, the danger from fallout radiation lessens with time. The radioactive decay, as this lessening is called, is rapid at first, then gets slower and slower. The dose rate (the amount of radiation received per hour) decreases accordingly. Figure 1.2 illustrates the rapidity of the decay of radiation from fallout during the first two days after the nuclear explosion that produced it. R stands for roentgen, a measurement unit often used to measure exposure to gamma rays and X rays. Fallout meters called dosimeters measure the dose received by recording the number of R. Fallout meters called survey meters, or dose-rate meters, measure the dose rate by recording the number of R being received per hour at the time of measurement. Notice that it takes about seven times as long for the dose rate to decay from 1000 roentgens per hour (1000 R/hr) to 10 R/hr (48 hours) as to decay from 1000 R/hr to 100 R/hr (7 hours). (Only in high-fallout areas would the dose rate 1 hour after the explosion be as high as 1000 roentgens per hour.) Book Page: 13 If the dose rate 1 hour after an explosion is 1000 R/hr, it would take about 2 weeks for the dose rate to be reduced to 1 R/hr solely as a result of radioactive decay. Weathering effects will reduce the dose rate further,' for example, rain can wash fallout particles from plants and houses to lower positions on or closer to the ground. Surrounding objects would reduce the radiation dose from these low-lying particles. Figure 1.2 also illustrates the fact that at a typical location where a given amount of fallout from an explosion is deposited later than 1 hour after the explosion, the highest dose rate and the total dose received at that location are less than at a location where the same amount of fallout is deposited 1 hour after the explosion. The longer fallout particles have been airborne before reaching the ground, the less dangerous is their radiation. Within two weeks after an attack the occupants of most shelters could safely stop using them, or could work outside the shelters for an increasing number of hours each day. Exceptions would be in areas of extremely heavy fallout such as might occur downwind from important targets attacked with many weapons, especially missile sites and very large cities. To know when to come out safely, occupants either would need a reliable fallout meter to measure the changing radiation dangers, or must receive information based on measurements made nearby with a reliable instrument. The radiation dose that will kill a person varies considerably with different people. A dose of 450 R resulting from exposure of the whole body to fallout radiation is often said to be the dose that will kill about half the persons receiving it, although most studies indicate that it would take somewhat less.1 (Note: A number written after a statement refers the reader to a source listed in the Selected References that follow Appendix D.) Almost all persons confined to expedient shelters after a nuclear attack would be under stress and without clean surroundings or antibiotics to fight infections. Many also would lack adequate water and food. Under these unprecedented conditions, perhaps half the persons who received a whole-body dose of 350 R within a few days would die.2 Fortunately, the human body can repair most radiation damage if the daily radiation doses are not too large. As will be explained in Appendix B, a person who is healthy and has not been exposed in the past two weeks to a total radiation dose of more than 100 R can receive a dose of 6 R each day for at least two months without being incapacitated. Only a very small fraction of Hiroshima and Nagasaki citizens who survived radiation doses some of which were nearly fatal have suffered serious delayed effects. The reader should realize that to do essential work after a massive nuclear attack, many survivors must be willing to receive much larger radiation doses than are normally permissible. Otherwise, too many workers would stay inside shelter too much of the time, and work that would be vital to national recovery could not be done. For example, if the great majority of truckers were so fearful of receiving even non-incapacitating radiation doses that they would refuse to transport food, additional millions would die from starvation alone. ° Myth: Fallout radiation penetrates everything; there is no escaping its deadly effects. ° Facts: Some gamma radiation from fallout will penetrate the shielding materials of even an excellent shelter and reach its occupants. However, the radiation dose that the occupants of an excellent shelter would receive while inside this shelter can be reduced to a dose smaller than the average American receives during his lifetime from X rays and other radiation exposures normal in America today. The design features of such a shelter include the use of a sufficient thickness of earth or other heavy shielding material. Gamma rays are like X rays, but more penetrating. Figure 1.3 shows how rapidly gamma rays are reduced in number (but not in their ability to penetrate) by layers of packed earth. Each of the layers shown is one halving-thickness of packed earth- about 3.6 inches (9 centimeters).3 A halving- thickness is the thickness of a material which reduces by half the dose of radiation that passes through it. The actual paths of gamma rays passing through shielding materials are much more complicated, due to scattering, etc., than are the straight-line paths shown in Fig. 1.3. But when averaged out, the effectiveness of a halving-thickness of any material is approximately as shown. The denser a substance, the better it serves for shielding material. Thus, a halving-thickness of concrete is only about 2.4 inches (6.1 cm). Book Page: 14 Fig. 1.3. Illustration of shielding against fallout radiation. Note the increasingly large improvements in the attenuation (reduction) factors that are attained as each additional halving-thickness of packed earth is added. ORNL-DWG 78-18834 If additional halving-thicknesses of packed earth shielding are successively added to the five thicknesses shown in Fig. 1.3, the protection factor (PF) is successively increased from 32 to 64, to 128, to 256, to 512, to 1024, and so on. ° Myth: A heavy nuclear attack would set practically everything on fire, causing "firestorms" in cities that would exhaust the oxygen in the air. All shelter occupants would be killed by the intense heat. ° Facts: On aclear day, thermal pulses (heat radiation that travels at the speed of light) from an air burst can set fire to easily ignitable materials (such as window curtains, upholstery, dry newspaper, and dry grass) over about as large an area as is damaged by the blast. It can cause second-degree skin burns to exposed people who are as far as ten miles from a one-megaton (1 MT) explosion. (See Fig. 1.4.) (A 1-MT nuclear explosion is one that produces the same amount of energy as does one million tons of TNT.) If the weather is very clear and dry, the area of fire danger could be considerably larger. On a cloudy or smoggy day, however, particles in the air would absorb and scatter much of the heat radiation, and the area endangered by heat radiation from the fireball would be less than the area of severe blast damage. Book Page: 15 Fig. 1.4. An air burst. Thefireball does not touch the ground. No crater. An air burst produces only extremely small radioactive particles-so small that they are airborne for days to years unless brought to earth by rain or snow. Wet deposition of fallout from both surface and air bursts can result in '"hot spots" at, close to, or far from ground zero. However, such '"hot spots" from air bursts are much less dangerous than the fallout produced by the surface or near-surface bursting of the same weapons. The main dangers from an air burst are the blast effects, the thermal pulses of intense light and heat radiation, and the very penetrating initial nuclear radiation from the fireball. ORNL.DWG 78.6267 "Firestorms" could occur only when the concentration of combustible structures is very high, as in the very dense centers of a few old American cities. At rural and suburban building densities, most people in earth- covered fallout shelters would not have their lives endangered by fires. ° Myth: In theworst-hit parts of Hiroshima and Nagasaki where all buildings were demolished, everyone was killed by blast, radiation, or fire. ° Facts: InNagasaki, some people survived uninjured who were far inside tunnel shelters built for conventional air raids and located as close as one-third mile from ground zero (the point directly below the explosion). This was true even though these long, large shelters lacked blast doors and were deep inside the zone within which all buildings were destroyed. (People far inside long, large, open shelters are better protected than are those inside small, open shelters.) Fig. 1.5. Undamaged earth-covered family shelter in Nagasaki. Many earth-covered family shelters were essentially undamaged in areas where blast and fire destroyed all buildings. Figure 1.5 shows a typical earth covered, backyard family shelter with a crude wooden frame. This shelter was essentially undamaged, although less than 100 yards from ground zero at Nagasaki.4 The calculated maximum overpressure (pressure above the normal air pressure) was about 65 pounds per square inch (65 psi). Persons inside so small a shelter without a blast doorwould have been killed by blast pressure at this distance from the explosion. However, in a recent blast test,5 an earth-covered, expedient Small-Pole Shelter equipped with blast doors was undamaged at 53 psi. The pressure rise inside was slight not even enough to have damaged occupants' eardrums. If poles are available, field tests have indicated that many families can build such shelters in a few days. The great life-saving potential of blast-protective shelters has been proven in war and confirmed by blast tests and calculations. For example, the area in which the air bursting of a 1-megaton weapon would wreck a 50-psi shelter with blast doors in about 2.7 square miles. Within this roughly circular area, practically all them occupants of wrecked shelters would be killed by blast, carbon monoxide from fires, or radiation. The same blast effects would kill most people who were using basements affording 5 psi protection, over an area of about 58 square miles.6 ° Myth: Because some modern H-bombs are over 1000 times as powerful as the A-bomb that destroyed most of Hiroshima, these H-bombs are 1000 times as deadly and destructive. ° Facts: A nuclear weapon 1000 times as powerful as the one that blasted Hiroshima, if exploded under comparable conditions, produces equally serious blast damage to wood-frame houses over an area up to about 130 times as large, not 1000 times as large. Book Page: 16 For example, air bursting a 20-kiloton weapon at the optimum height to destroy most buildings will destroy or severely damage houses out to about 1.42 miles from ground zero.6 The circular area of at least severe blast damage will be about 6.33 square miles. (The explosion of a 20 kiloton weapon releases the same amount of energy as 20 thousand tons of TNT.) One thousand 20-kiloton weapons thus air burst, well separated to avoid overlap of their blast areas, would destroy or severely damage houses over areas totaling approximately 6,330 square miles. In contrast, similar air bursting of one 20- megaton weapon (equivalent in explosive power to 20 million tons of TNT) would destroy or severely damage the great majority of houses out to a distance of 16 miles from ground zero.6 The area of destruction would be about 800 square miles - not 6,330 square miles. Today few if any of Russia's huge intercontinental ballistic missiles (ICBMs) are armed with a 20-megaton warhead. Now a huge Russian ICBM, the SS-18, typically carries 10 warheads, each having a yield of 500 kilotons, each programmed to hit a separate target. See Jane's Weapon Systems, 1987-88. ° Myth: A Russian nuclear attack on the United States would completely destroy all American cities. ° Facts: As long as Soviet leaders are rational they will continue to give first priority to knocking out our weapons and other military assets that can damage Russia and kill Russians. To explode enough nuclear weapons of any size to completely destroy American cities would be an irrational waste of warheads. The Soviets can make much better use of most of the warheads that would be required to completely destroy American cities; the majority of those warheads probably already are targeted to knock out our retaliatory missiles by being surface burst or near-surface burst on their hardened silos, located far from most cities and densely populated areas. Unfortunately, many militarily significant targets - including naval vessels in port and port facilities, bombers and fighters on the ground, air base and airport facilities that can be used by bombers, Army installations, and key defense factories - are in or close to American cities. In the event of an all-out Soviet attack, most of these '"soft" targets would be destroyed by air bursts. Air bursting (see Fig. 1.4) a given weapon subjects about twice as large an area to blast effects severe enough to destroy "soft" targets as does surface bursting (see Fig. 1.1) the same weapon. Fortunately for Americans living outside blast and fire areas, air bursts produce only very tiny particles. Most of these extremely small radioactive particles remain airborne for so long that their radioactive decay and wide dispersal before reaching the ground make them much less life- endangering than the promptly deposited larger fallout particles from surface and near-surface bursts. However, if you are a survival minded American you should prepare to survive heavy fallout wherever you are. Unpredictable winds may bring fallout from unexpected directions. Or your area may be in a "hot spot" of life-endangering fallout caused by a rain-out or snow-out of both small and tiny particles from distant explosions. Or the enemy may use surface or near-surface bursts in your part of the country to crater long runways or otherwise disrupt U.S. retaliatory actions by producing heavy local fallout. Today few if any of Russia's largest intercontinental ballistic missiles (ICBMs) are armed with a 20-megaton warhead. A huge Russian ICBM, the SS-18, typically carries 10 warheads each having a yield of 500 kilotons, each programmed to hit a separate target. See "Jane's Weapon Systems. 1987-1988." However, in March 1990 CIA Director William Webster told the U.S. Senate Armed Services Committee that ".... The USSR's strategic modernization program continues unabated," and that the SS-18 Mod 5 can carry 14 to 20 nuclear warheads. The warheads are generally assumed to be smaller than those of the older SS-18s. ° Myth: So much food and water will be poisoned by fallout that people will starve and die even in fallout areas where there is enough food and water. ° Facts: If the falloutparticles do not become mixed with the parts of food that are eaten, no harm is done. Food and water in dust-tight containers are not contaminated by fallout radiation. Peeling fruits and vegetables removes essentially all fallout, as does removing the uppermost several inches of stored grain onto which fallout particles have fallen. Water from many sources -- such as deep wells and covered reservoirs, tanks, and containers -- would not be contaminated. Even water containing dissolved radioactive elements and compounds can be made safe for drinking by simply filtering it through earth, as described later in this book. ° Myth: Most of the unborn children and grandchildren of people who have been exposed to radiation from nuclear explosions will be genetically damaged will be malformed, delayed victims of nuclear war. ° Facts: The authoritative study by the National Academy of Sciences, A Thirty Year Study of the Survivors qf Hiroshima and Nagasaki, was published in 1977. It concludes that the incidence of abnormalities is no higher among children later conceived by parents who were exposed to radiation during the attacks on Hiroshima and Nagasaki than is the incidence of abnormalities among Japanese children born to un-exposed parents. This is not to say that there would be no genetic damage, nor that some fetuses subjected to large radiation doses would not be damaged. But the overwhelming evidence does show that the exaggerated fears of radiation damage to future generations are not supported by scientific findings. ° Myth: Overkill would result if all the U.S. and U.S.S.R, nuclear weapons were used meaning not only that the two superpowers have more than enough weapons to kill all of each other's people, but also that they have enough weapons to exterminate the human race. Book Page: 17 ° Facts: Statements that the U.S. and the Soviet Union have the power to kill the world's population several times over are based on misleading calculations. One such calculation is to multiply the deaths produced per kiloton exploded over Hiroshima or Nagasaki by an estimate of the number of kilotons in either side's arsenal. (A kiloton explosion is one that produces the same amount of energy as does 1000 tons of TNT.) The unstated assumption is that somehow the world's population could be gathered into circular crowds, each a few miles in diameter with a population density equal to downtown Hiroshima or Nagasaki, and then a small (Hiroshima-sized) weapon would be exploded over the center of each crowd. Other misleading calculations are based on exaggerations of the dangers from long-lasting radiation and other harmful effects of a nuclear war. ° Myth: Blindness and a disastrous increase of cancers would be the fate of survivors of a nuclear war, because the nuclear explosions would destroy so much of the protective ozone in the stratosphere that far too much ultraviolet light would reach the earth's surface. Even birds and insects would be blinded. People could not work outdoors in daytime for years without dark glasses, and would have to wear protective clothing to prevent incapacitating sunburn. Plants would be badly injured and food production greatly reduced. ° Facts: Large nuclear explosions do inject huge amounts of nitrogen oxides (gasses that destroy ozone) into the stratosphere. However, the percent of the stratospheric ozone destroyed by a given amount of nitrogen oxides has been greatly overestimated in almost all theoretical calculations and models. For example, the Soviet and U.S. atmospheric nuclear test explosions of large weapons in 1952-1962 were calculated by Foley and Ruderman to result in a reduction of more than 10 percent in total ozone. (See M. H. Foley and M. A. Ruderman, 'Stratospheric NO from Past Nuclear Explosions", Journal of Geophysics, Res. 78, 4441-4450.) Yet observations that they cited showed no reductions in ozone. Nor did ultraviolet increase. Other theoreticians calculated sizable reductions in total ozone, but interpreted the observational data to indicate either no reduction, or much smaller reductions than their calculated ones. A realistic simplified estimate of the increased ultraviolet light dangers to American survivors of a large nuclear war equates these hazards to moving from San Francisco to sea level at the equator, where the sea level incidence of skin cancers (seldom fatal) is highest- about 10 times higher than the incidence at San Francisco. Many additional thousands of American survivors might get skin cancer, but little or no increase in skin cancers might result if in the post-attack world deliberate sun tanning and going around hatless went out of fashion. Furthermore, almost all of today's warheads are smaller than those exploded in the large- weapons tests mentioned above; most would inject much smaller amounts of ozone-destroying gasses, or no gasses, into the stratosphere, where ozone deficiencies may persist for years. And nuclear weapons smaller than 500 kilotons result in increases (due to smog reactions) in upper tropospheric ozone. In a nuclear war, these increases would partially compensate for the upper-level tropospheric decreases-as explained by Julius S. Chang and Donald J. Wuebbles of Lawrence Livermore National Laboratory. ° Myth: Unsurvivable "nuclear winter" surely will follow a nuclear war. The world will be frozen if only 100 megatons (less than one percent of all nuclear weapons) are used to ignite cities. World-enveloping smoke from fires and the dust from surface bursts will prevent almost all sunlight and solar heat from reaching the earth's surface. Universal darkness for weeks! Sub-zero temperatures, even in summertime! Frozen crops, even in the jungles of South America! Worldwide famine! Whole species of animals and plants exterminated! The survival of mankind in doubt! ° Facts: Unsurvivable "nuclear winter" is a discredited theory that, since its conception in 1982, has been used to frighten additional millions into believing that trying to survive a nuclear war is a waste of effort and resources, and that only by ridding the world of almost all nuclear weapons do we have a chance of surviving. Non-propagandizing scientists recently havecalculated that the climatic and other environmental effects of even an all-out nuclear war would be much less severe than the catastrophic effects repeatedly publicized by popular astronomer Carl Sagan and his fellow activist scientists, and by all the involved Soviet scientists. Conclusions reached from these recent, realistic calculations are summarized in an article, "Nuclear Winter Reappraised", featured in the 1986 summer issue of Foreign Affairs, the prestigious quarterly of the Council on Foreign Relations. The authors, Starley L. Thompson and Stephen H. Schneider, are atmospheric scientists with the National Center for Atmospheric Research. They showed " that on scientific grounds the global apocalyptic conclusions of the initial nuclear winter hypothesis can now be relegated to a vanishing low level of probability." Book Page: 18 Their models indicate that in July (when the greatest temperature reductions would result) the average temperature in the United States would be reduced for a few days from about 70 degrees Fahrenheit to approximately 50 degrees. (In contrast, under the same conditions Carl Sagan, his associates, and the Russian scientists predicted a resulting average temperature of about 10 degrees below zero Fahrenheit, lasting for many weeks!) Persons who want to learn more about possible post-attack climatic effects also should read the Fall 1986 issue of Foreign Affairs. This issue contains a long letter from Thompson and Schneider which further demolishes the theory of catastrophic "nuclear winter." Continuing studies indicate there will be even smaller reductions in temperature than those calculated by Thompson and Schneider. Soviet propagandists promptly exploited belief in unsurvivable "nuclear winter" to increase fear of nuclear weapons and war, and to demoralize their enemies. Because raging city firestorms are needed to inject huge amounts of smoke into the stratosphere and thus, according to one discredited theory, prevent almost all solar heat from reaching the ground, the Soviets changed their descriptions of how a modern city will burn if blasted by a nuclear explosion. Figure 1.6 pictures how Russian scientists and civil defense officials realistically described - before the invention of "nuclear winter" - the burning of a city hit by a nuclear weapon. Buildings in the blasted area for miles around ground zero will be reduced to scattered rubble - mostly of concrete, steel, and other nonflammable materials - that will not burn in blazing fires. Thus in the Oak Ridge National Laboratory translation (ORNL-TR-2793) of Civil Defense. Second Edition (500,000 copies), Moscow, 1970, by Egorov, Shlyakhov, and Alabin, we read: "Fires do not occur in zones of complete destruction . . . that are characterized by an overpressure exceeding 0.5 kg/cm2 [- 7 psi]., because rubble is scattered and covers the burning structures. As a result the rubble only smolders, and fires as such do not occur." Fig. 1.6. Drawing with Caption in a Russian Civil Defense Training Film Strip. The blazing fires ignited by a surface burst are shown in standing buildings outside the miles-wide "zone of complete destruction," where the blast-hurled "rubble only smolders." Translation: [Radioactive] contamination occurs in the area of the explosion and also along the trajectory of the cloud which forms a radioactive track. Book Page: 19 Firestorms destroyed the centers of Hamburg, Dresden, and Tokyo. The old-fashioned buildings of those cities contained large amounts of flammable materials, were ignited by many thousands of small incendiaries, and burned quickly as standing structures well supplied with air. No firestorm has ever injected smoke into the stratosphere, or caused appreciable cooling below its smoke cloud. The theory that smoke from burning cities and forests and dust from nuclear explosions would cause worldwide freezing temperatures was conceived in 1982 by the German atmospheric chemist and environmentalist Paul Crutzen, and continues to be promoted by a worldwide propaganda campaign. This well funded campaign began in 1983 with televised scientific-political meetings in Cambridge and Washington featuring American and Russian scientists. A barrage of newspaper and magazine articles followed, including a scaremongering article by Carl Sagan in the October 30, 1983 issue of Parade, the Sunday tabloid read by millions. The most influential article was featured in the December 23,1983 issue of Science (the weekly magazine of the American Association for the Advancement of Science): "Nuclear winter, global consequences of multiple nuclear explosions," by five scientists, R. P. Turco, O. B. Toon, T. P. Ackerman, J. B. Pollack, and C. Sagan. Significantly, these activists listed their names to spell TTAPS, pronounced "taps," the bugle call proclaiming "lights out" or the end of a military funeral. Until 1985, non-propagandizing scientists did not begin to effectively refute the numerous errors, unrealistic assumptions, and computer modeling weakness' of the TTAPS and related "nuclear winter" hypotheses. A principal reason is that government organizations, private corporations, and most scientists generally avoid getting involved in political controversies, or making statements likely to enable antinuclear activists to accuse them of minimizing nuclear war dangers, thus undermining hopes for peace. Stephen Schneider has been called a fascist by some disarmament supporters for having written "Nuclear Winter Reappraised," according to the Rocky Mountain News of July 6, 1986. Three days later, this paper, that until recently featured accounts of unsurvivable "nuclear winter," criticized Carl Sagan and defended Thompson and Schneider in its lead editorial, "In Study of Nuclear Winter, Let Scientists Be Scientists." In a free country, truth will out - although sometimes too late to effectively counter fast-hittingpropaganda. Effective refutation of "nuclear winter" also was delayed by the prestige of politicians and of politically motivated scientists and scientific organizations endorsing the TTAPS forecast of worldwide doom. Furthermore, the weakness' in the TTAPS hypothesis could not be effectively explored until adequate Government funding was made available to cover costs of lengthy, expensive studies, including improved computer modeling of interrelated, poorly understood meteorological phenomena.

### 1NC – Defense

#### **We won’t care about losing a satellite**

Bleddyn Bowen 18, University of Leicester International Relations Lecturer, "The Art of Space Deterrence," European Leadership Network, 2-20-18, https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/

As consensus emerges on the possibility that, should a major war occur, satellites will mostly likely be attacked or harassed in one way or another, there is increasing deliberation on ‘space deterrence’, or how to prevent would-be aggressors from attacking satellites and other parts of space infrastructure on Earth. Reasoned analysis focuses on applying imagined thresholds of sensitivity and reaction based on the types of satellites attacked, how they are attacked, and when they are attacked in a crisis. For example, a Planet Labs imaging satellite being jammed outside of a crisis is a different incident compared to a Keyhole imagery satellite being destroyed during a Taiwan crisis.

Indeed, it is crucial to think about what systems any space power may value above all others, which they may be able to suffer losing, and which losses may provoke a stern reaction. Most tools of space warfare today, of which America, China, and Russia lead, include jamming and Earth-based kinetic-kill capabilities that are ground, sea, or air missile based. Additionally, many Earth-based weapons such as missiles, attack aircraft, and naval vessels can bombard ground facilities if they are in range. However, as those narrow discussion tend to delve into the technical and tactical weeds, there are useful principles to remember when considering space deterrence on a more strategic level.

With the tools of space warfare spreading, then, how does one deter an adversary from attacking one’s valuable and essential space infrastructure that is responsible for precision warfare as well as precision farming? This is a very difficult question to answer, and there are no direct and holistic ones to be given. But general ground rules for strategic thought can be provided. The difficulty is that any reason to think that space deterrence may be easier to achieve than equivalents on Earth has a counter that may highlight why, in some circumstances, space deterrence may be harder to impose in the mind of the adversary.

First, politics, strategy, and deterrence relationships in space are extensions of those on Earth. Space deterrence remains an art of understanding the opponent’s psychology, valued possessions, and political objectives, as space deterrence is just a thematic or geographic variant of deterrence in general. Although space specialists are needed to understand spacepower, war in space is still subject to the same strategic logic as other terrestrial environments, and therefore deterrence in space cannot ignore events on Earth. Space warfare is merely the continuation of Terran politics by other means; a shooting war is space does not occur in a political vacuum. Additionally, some countries may have an ability to attack or disrupt satellites but possess no space-based assets of their own. Therefore, a tit-for-tat exchange of responding to a satellite attack with a satellite attack will not always be an option. Terrestrial threats and retaliation may be called for to deter attacks on space assets and space deterrence requires a joint approach, just as a joint approach to modern deterrence on Earth requires spacepower to function.

Adhering too narrowly to the concept of ‘space deterrence’ can mislead analysis to isolate space from Earth. It is as misleading as speaking in terms of ‘air deterrence’ or ‘sea deterrence’. Deterring a state from taking a particular action in any environment requires more than one method of deterring by denial or punishment. Rather, modern deterrence relationships need to account for the role space systems play in building holistic deterrent and warfare capabilities in every environment, as well as the role satellites and space infrastructure may play in triggering, exacerbating, or resolving crises on Earth, as well as winning wars.

Space is often an afterthought or a miscellaneous ancillary in the grand strategic views of top-level decision-makers. A president may not care that one satellite may be lost or go dark; it may cause panic and Twitter-based hysteria for the space community, of course. But the terrestrial context and consequences, as well as the political stakes and symbolism of any exchange of hostilities in space matters more. The political and media dimension can magnify or minimise the perceived consequences of losing specific satellites out of all proportion to their actual strategic effect.

### 1NC – Ag

#### Satellites are crucial for large, industrial megafarms

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Agriculture

To feed the Earth's growing population affordably, farming has gone from a mostly decentralized, family-owned business to corporate farming on a scale never before imagined. These industrial megafarms are a primary reason that many people in the world can enjoy plentiful and varied foods at a reasonable cost. On this scale, deciding what crop to plant in a given field is not just business - it's science. And the science relies, in large part, on data from space.

Companies such as the Satellite Imaging Corporation (SIC) provide data from space on overall crop health, soil analysis, and irrigation impacts and efficiencies. From space, you can easily map soil variations, finding areas rich in organic matter and others less so - this allows optimized planting to take advantage of crops that thrive in any given soil environment. Very large farms also use satellite images to assess the overall health of their crops by land area, spotting those that are being impacted by non-optimal soil moisture content, etc., allowing the farmer to take corrective action while there is still time to save the crop.

#### Extinction.

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We hear a lot about how we’re running out of antibiotics. But we are also doomed to run out of pesticides, because insects inevitably develop resistance, whether toxic chemicals are sprayed directly or genetically engineered into the plants. Worse yet, weeds, insects, and fungus develop resistance in just 5 years on average, which has caused the chemicals to grow increasingly lethal over the past 60 years. And it takes on average eight to ten years to identify, test, and develop a new pesticide, though that isn’t long enough to discover the long-term toxicity to humans and other organisms. And this devil’s bargain hasn’t even provided most of the gains in crop yields, which is due to natural-gas and phosphate fertilizers plus soil-crushing tractors and harvesters that can do the work of millions of men and horses quickly on farms that grow only one crop on thousands of acres. Yet before pesticides, farmers lost a third of their crops to pests, after pesticides, farmers still lose a third of their crops. Even without pesticides, industrial agriculture is doomed to fail from extremely high rates of soil erosion and soil compaction at rates that far exceed losses in the past, since soil couldn’t wash or blow away as easily on small farms that grew many crops. But pest killing chemicals are surely accelerating the day of reckoning sooner rather than later. Enormous amounts of toxic chemicals are dumped on land every year — over 1 billion pounds are used in the United State (US) every year and 5.6 billion pounds globally (Alavanja 2009). This destroys the very ecosystems that used to help plants fight off pests, and is a major factor biodiversity loss and extinction. Evidence also points to pesticides playing a key role in the loss of bees and their pollination services. Although paleo-diet fanatics won’t mind eating mostly meat when fruit, vegetable, and nut crops are gone, they will not be so happy about having to eat more carbohydrates. Wheat and other grains will still be around, since they are wind-pollinated. Agricultural chemicals render land lifeless and toxic to beneficial creatures, also killing the food chain above — fish, amphibians, birds, and humans (from cancer, chronic disease, and suicide). Surely a day is coming when pesticides stop working, resulting in massive famines. But who is there to speak for the grandchildren? And those that do speak for them are mowed down by the logic of libertarian capitalism, which only cares about profits today. Given that a political party is now in power in the U.S. that wants to get rid of the protections the Environmental Protection Agency (EPA) and other agencies provide, may make matters worse if agricultural chemicals are allowed to be more toxic, long-lasting, and released earlier, before being fully tested for health effects. Meanwhile chemical and genetic engineering companies are making a fortune, because the farmers have to pay full price, since the pests develop resistance long before a product is old enough to be made generically. Except for glyphosate, but weeds have developed resistance. Predictably. In fact, the inevitability of resistance has been known for nearly seven decades. In 1951, as the world began using synthetic chemicals, Dr. Reginald Painter at Kansas State University published “Insect Resistance in Crop Plants”. He made a case that it would be better to understand how a crop plant fought off insects, since it was inevitable that insects would develop genetic or behavioral resistance. At best, chemicals might be used as an emergency control measure. Farmers will say that we simply must carry on like this, there’s no other choice. But that’s simply not true. Consider the corn rootworm, that costs farmers about $2 billion a year in lost crops despite spending hundreds of millions on chemicals and the hundreds of millions of dollars chemical companies spend developing new chemicals. To lower the chances of corn pests developing resistance, corn crops were rotated with soybeans. Predictably, a few mutated to eat soybeans plus changed their behavior. They used to only lay eggs on nearby corn plants, now they disperse to lay eggs on soybean crops as well. Worse yet, corn is more profitable than soy and many farmers began growing continuous corn. Already the corn rootworm is developing resistance to the latest and greatest chemicals. But the corn rootworm is not causing devastation in Europe, because farms are smaller and most farmers rotate not just soy, but wheat, alfalfa, sorghum and oats with corn (Nordhaus 2017). Before planting, farmers try to get rid of pests that survived the winter and apply fumigants to kill fungi and nematodes, and pre-emergent chemicals to reduce weed seeds from emerging. Even farmers practicing no-till farming douse the land with herbicides by using GMO herbicide-resistant crops. Then over the course of crop growth, farmers may apply several rounds of additional pesticides to control different pests. For example, cotton growers apply chemicals from 12 to 30 times before harvest. Currently, the potential harm is only assessed for 2 to 3 years before a permit is issued, even though the damage might occur up to 20 years later. Although these chemicals appear to be just like antibiotics, that isn’t entirely true. We develop some immunity to a disease after antibiotics help us recover, but a plant is still vulnerable to the pests and weeds with the genetics or behavior to survive and chemical assault. Although there are thousands of chemical toxins, what matters is how they kill, their method of action (MOA). For herbicides there are only 29 MOAs, for insecticides, just 28. So if a pest develops resistance to one chemical within an MOA, it will be resistant to all of the thousands of chemicals within that MOA. The demand for chemicals has also grown due the high level of bioinvasive species. It takes a while to find native pests and make sure they won’t do more harm than good. In the 1950s there were just three main corn pests. By 1978 there were 40, and they vary regionally. For example, California has 30 arthropods and over 14 fungal diseases to cope with. When I was learning how to grow food organically back in the 90s, I remember how outraged organic farmers were that Monsanto was going to genetically engineer plants to have the Bt bacteria in them. This is because the only insecticide organic farmers can use is Bt bacteria, because it is found in the soil. It’s natural. Organic farmers have been careful to spray only in emergencies so that insects didn’t develop resistance to their only remedy. Since 1996, GMO plants have been engineered to have Bt in them, and predictably, insects have developed resistance. For example, in 2015, 81% of all corn was planted with genetically engineered Bt. But corn earworms have developed resistance, especially in North Carolina and Georgia, setting the stage for damage across the nation. Five other insects have developed resistance to Bt as well. GMO plants were also going to reduce pesticide use. They did for a while, but not for long. Chemical use has increased 7% to 202,000 tons a year in the past 10 years. Resistance can come in other ways than mutations. Behavior can change. Cockroach bait is laced with glucose, so cockroaches that developed glucose-aversion now no longer take the bait. It is worth repeating that chemicals and other practices are ruining the long-term viability of agriculture. Here is how author Dyer explains it: “Ultimately the practice of modern farming is not sustainable” because “the damage to the soil and natural ecosystems is so great that farming becomes dependent not on the land but on the artificial inputs into the process, such as fertilizers and pesticides. In many ways, our battle against the diverse array of pest species is a battle against the health of the system itself. As we kill pest species, we also kill related species that may be beneficial. We kill predators that could assist our efforts. We reduce the ecosystem’s ability to recover due to reduced diversity, and we interfere with the organisms that affect the biogeochemical processes that maintain the soils in which the plants grow. Soil is a complex, multifaceted living thing that is far more than the sum of the sand, silt, clay, fungi, microbes, nematodes, and other invertebrates. All biotic components interact as an ecosystem within the soil and at the surface, and in relation to the larger components such as herbivores that move across the land. Organisms grow and dig through the soil, aerate it, reorganize it, and add and subtract organic material. Mature soil is structured and layered and, very importantly, it remains in place. Plowing of the soil turns everything upside down. What was hidden from light is exposed. What was kept at a constant temperature is now varying with the day and night and seasons. What cannot tolerate drying conditions at the surface is likely killed. And very sensitive and delicate structures within the soil are disrupted and destroyed. Conventional tillage disrupts the entire soil ecosystem. Tractors and farm equipment are large and heavy; they compact the soil, which removes air space and water-holding capacity. Wind and water erosion remove the smallest soil particles, which typically hold most of the micronutrients needed by plants. Synthetic fertilizers are added to supplement the loss of oil nutrients but often are relatively toxic to many soil organisms. And chemicals such as pre-emergents, fumigants, herbicides, insecticides, acaricides, fungicides, and defoliants eventually kill all but the most tolerant or resistant soil organisms. It does not take long to reduce a native, living, dynamic soil to a relatively lifeless collection of inorganic particles with little of the natural structure and function of undisturbed soil”. When I told my husband all the reasons we use agricultural chemicals and the harm done, my husband got angry and said “Farmers aren’t stupid, that can’t be right!” I think there are a number of reasons why farmers don’t go back to sustainable organic farming. First, there is far too much money to be made in the chemical herbicide, pesticide, and insecticide industry to stop this juggernaut. After reading Lessig’s book “Republic, Lost”, one of the best, if not the best book on campaign finance reform, I despair of campaign financing ever happening. So chemical lobbyists will continue to donate enough money to politicians to maintain the status quo. Plus the chemical industry has infiltrated regulatory agencies via the revolving door for decades and is now in a position to assassinate the EPA, with newly appointed Scott Pruitt, who would like to get rid of the EPA. Second, about half of farmers are hired guns. They don’t own the land and care about passing it on in good health to their children. They rent the land, and their goal, and the owner’s goal is for them to make as much profit as possible. Third, renters and farmers both would lose money, maybe go out of business in the years it would take to convert an industrial monoculture farm to multiple crops rotated, or an organic farm. Fourth, it takes time to learn to farm organically properly. So even if the farmer survives financially, mistakes will be made. Hopefully made up for by the higher price of organic food, but as wealth grows increasingly more unevenly distributed, and the risk of another economic crash grows (not to mention lack of reforms, being in more debt now than 2008, etc). Fifth, industrial farming is what is taught at most universities. There are only a handful of universities that offer programs in organic agriculture. Sixth, subsidies favor large farmers, who are also the only farmers who have the money to profit from economies of scale, and buy their own giant tractors to farm a thousand acres of monoculture crops. Industrial farming has driven 5 million farmers off the land who couldn’t compete with the profits made by larger farms in the area. But farmers will have to go organic whether they like it or not It’s hard to say whether this will happen because we’ve run out of pesticides, whether from resistance or a financial crash reducing new chemical research, or whether peak oil, peak coal, and peak natural gas will cause the decline of chemical farming. Agriculture uses about 15 to 20% of fossil fuel energy, from natural gas fertilizer, oil-based chemicals, farm vehicle and equipment fuel, the agricultural cold chain, distribution, packaging, refrigeration, and cooking to name a few of the uses. At some point of fossil decline, there won’t be enough fuel or pesticides to continue business as usual. Farmers will be forced to go organic at some point. Wouldn’t it be easier to start the transition now?

### 1NC – Fracking

#### Satellite loss shuts down global fracking

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Energy, environment, farming, mining, land use. All of these areas and more are now inextricably linked to satellite data and would be devastated should that flow of data stop. Environmental Monitoring Oh how complacent we've become. We take for granted that we will have instant images from space showing a volcanic eruption somewhere in the South Pacific within hours of learning that it happened. When the BP oll spill happened in the Gulf of Mexico in 2010, satellite images were used in conjunction with aircraft and ships to monitor the extent and evolving nature of the spill (Figures 10.1 and 10.2). The data were also used to direct the ships that were attempting to clean up the spill, to warn fishermen of areas in which it would be dangerous to fish, and to generally monitor the extent of the disaster. This is the type of data we get from space in a field known as remote sensing. Remote sensing is, well, exactly what its name implies. With it, you gather data, or sense, usually in the form of electromagnetic radiation (light), remotely - that is, you are not physically touching what you are looking at. Satellite remote sensing began shortly after we began launching satellites and many industries are now totally dependent upon having the capability. We use satellites, like the venerable Landsat series, to study the Earth m unprecedented detail. Since 1972, Landsat satellites have taken millions of high resolution images of the Earth's surface, allowing comprehensive studies of how the land has changed due to human intervention (deforestation, agriculture, settlement, etc.) and natural processes (desertification, floods, etc.). The best way to understand how useful Landsat and similar data can be to governments at all levels is best illustrated by looking at 14then and now" photographs. For example, Africa's Lake Chad has been shrinking for 40 years, as the desert has encroached on this once plentiful inland freshwater lake. Forty years ago, there were about 15,000 square miles of water within the lake. Now, it is less than 500 square miles (Figure 10.3) [1]. And what is the practical side of this particular bit of information? Governments use this type of satellite imagery to avoid human tragedy. Hundreds of thousands of people, if not millions, depend upon the waters of Lake Chad for agriculture, industry, and personal hygiene. With the lake going dry, how has this impacted on their livelihoods, their families, and their very lives? The European Space Agency (ESA) is freely providing satellite data to developing countries as they search for new sources of drinking water. For example, ESA assessed data obtained from space over Nigeria to find over 90 new freshwater sources within that country. After ground teams visited the new sites, all were confirmed to contain fresh water. This was no accident. These were satellites with sensors developed for just such purposes in mind [2]. Desertification is but one example of changing climates affecting people's everyday lives. What about more direct observations of our impact on the planet? Figures 10.4 and 10.5 show the scarring of the Earth's surface as a result of surface mining in West Virginia. This is not a polemic against mining; rather, it is an observation that we can use satellite imagery to monitor such mining and be mindful of its impact on the environment. Other than taking pictures of surface features, like lakes and open pit mines, how are satellites monitoring the Earth's changing climate? In just about every way, by: monitoring global land, sea, and atmospheric temperatures; measuring yearly average rainfall amounts just about everywhere on the globe; measuring glaciation rates; measuring sea surface heights; and more. Remote sensing is more than taking pictures of the Earth in the visible part of the spectrum. We can learn a great deal from looking at part of the spectrum that our eyes cannot see - but our instruments can. Shown in Figure 10.6 is a composite image of the Earth's surface showing the average land-surface temperature at night. The data came from two NASA satellites, Terra and Aqua, as they orbit the Earth in a polar orbit. (This means that they circle the Earth from top to bottom, passing over both the North and South Poles with each complete orbit.) Terra's orbit is such that it passes from the north to the south across the equator in the morning; Aqua passes south to north over the equator in the afternoon. Taken together, they observe the Earth's surface in its entirety every two days. Data sets such as this exist for just about any day of the year and can show either night-time lows or daytime highs. By looking in different parts of the spectrum, like the infrared light discussed above, we can make observations as described in Table 10.1. Pollution Monitoring As emerging countries industrialize, they also become polluters. Many of these countries are not exactly forthright about releasing air-pollution details to the media, so much of our awareness of the rising pollution there is anecdotal - typically m the form of stories told by people who have visited these countries and seen the extreme pollution at first hand. This, by the way, is not exactly scientific. Using satellites, and not relying on either the governments in question or second-hand stories, we can accurately assess the pollution levels there and elsewhere. Using satellite images to measure the amount of light absorbed or blocked by fine particulates in the atmosphere, otherwise known as air pollution, you can determine not only what the airborne pollutant might be, but also its size. And, by looking at the overall light blockage, an accurate estimate of the amount of pollution in the air can also be made. Recent studies show that many of these countries are covered in a pollution cloud that countries in the developed world would deem extremely harmful. And how do we know this with scientific certainty? From satellite measurements. Energy Production The recent boom in the production of shale oil in the United States and elsewhere is due in large part to the identification and geolocation of promising geologic formations for test drilling and fracking. "Fracking" is a somewhat new term that comes from the phrase "hydraulic fracturing". In fracking, massive amounts of previously unusable reservoirs of oil and natural gas are released for capture, sale, and transport from deposits deep within the Earth - many located at least a mile below the surface. In the United States alone, there may be as much as 750 trillion cubic feet of natural gas within shale deposits releasable by fracking [3]. How do energy companies know where to look for these deposits? In large part, by analyzing satellite imagery. According to Science Daily (26 February 2009), a new map of the Earth's gravitational field based on satellite measurements makes it much less resource intensive to find new oil deposits. The map will be particularly useful as the ice melts in the oil-rich Arctic regions. The easy-to-find oilfields have already been found. To fuel the growing world economy, those harder-to-find deposits must be located and tapped - which is why satellite imagery is so important. Take away this and other satellite-dependent techniques of oil and gas exploration and the world economy will feel the impact through higher oil and natural gas prices.

#### Fracking makes extinction inevitable.

Rev. Mac Legerton 18, Co-Founder and Executive Director of the Center for Community Action, Member of the Board of Directors of the NC Climate Solutions Coalition, Member of the Board of Directors of the Windcall Institute, “Will The U.S. Blaze A Trail To Mass Extinction?”, APPPL News, 1/15/2018, https://www.apppl.org/news/will-the-u-s-blaze-a-trail-to-mass-extinction/

As an elder, I now realize that there is even a greater threat to humanity and life on Earth than nuclear war—though, unlike a nuclear exchange, this threat is a slow-motion catastrophe. Can you guess what it is? Here’s a clue: it is something with which most people don’t have a personal relationship. Tragically, some persons remain in total denial of its validity, much less its present danger. And that’s the problem – that’s why this threat needs to be more seriously addressed on the local, state, national, and international level. What is it? It’s the slow-motion but rapidly growing catastrophe of climate change. There’s now good news amidst this seemingly overwhelming challenge. But the answer may surprise you. Today we know what is the #1 preventable cause of climate change. It’s not coal, it’s not nuclear, and it’s not oil and gasoline. It’s actually the use of the very fuel that is touted as being cleaner, greener, and cheaper than all the rest. This fuel is called “Natural Gas”. Let’s start with its name – “Natural Gas”. What is “natural gas”? There’s actually nothing “natural” about it when it is forcibly extracted from the ground through hydraulic fracturing, commonly known as “fracking”. When something is forcibly ruptured from deep within the earth with the use of toxic chemicals, the last name you would use for it is “natural”. Fracking disrupts the geologic fault lines causing earthquakes, uses millions of gallons of fresh water that becomes permanently poisoned by unknown, cancer-producing chemicals added to it, creates air pollution during the drilling process, increases the risk of injury and explosions, raises major health risks to both people and place in close proximity to it, and changes the nature of both neighborhoods and landscapes. Fracking also leaves a massive carbon footprint of drilling wells as deep as 8,000 feet and then drilling horizontally over 10,000 feet; On top of all this, it leaks major amounts of gas into the environment. So, what is this gas? It is 90-95% methane gas which is a hydrocarbon compound made up of one carbon atom and four hydrogen atoms (CH4). It releases carbon into the atmosphere and produces carbon dioxide (C02) just like coal does when it is burned. Methane is not its trace element–it is its undisputed compound of this fossil fuel product. If a compound is 90-95% of a product, it makes sense to call it by that name. Doesn’t it? Well, actually not if you want people to believe and think that it is something that it is not. It is un-natural methane gas produced under massive and highly toxic pressure and hazardous conditions. Now that we know what this gas is, what does it do to the atmosphere and climate that is so dangerous? This hydrocarbon has properties that block the radiation of heat from Earth’s surface 100 times more effectively than CO2 (released from burning coal) during its first 10 years of release and 86 times more effectively in its first 20 years. Because of the climate emergency underway, the first 10 or 20 years matter most. When utility companies and the larger fossil fuel companies state that they are committed to lowering carbon emissions, this just isn’t true. They are radically escalating the most dangerous and worst of all fossil fuels in relation to its impact on the climate. Now the industry wants to expand production of methane gas all over the world by calling it “the most environmentally friendly fossil fuel”and a “bridge fuel” that we can safely use until we transition to 100% renewable energy sources. Why would a major business industry want to call its product by another name? Perhaps for the same reason that the tobacco industry did not like the term “coffin nails” or “cancer sticks” for cigarettes. Honestly, there’s a striking similarity between what are called cigarettes and natural gas. When both were produced and named, their harm was not fully known. Once the industries promoting them learned of their significant harm, they did everything they could to hide this knowledge from the public. They even hired scientists to deny their dangers. The tobacco industry was eventually sued, the truth was acknowledged, and billions of dollars were paid out in the tobacco settlement. This same scenario that occurred with the tobacco industry needs to occur with methane gas and the fossil fuel industry. The major difference in these two scenarios is that that this fossil fuel product doesn’t just threaten the lives of individuals who voluntarily breathe it in – it threatens the lives of not only every human being, but also all life on the planet. The outcome of this scenario needs to be a moratorium and eventual end to all use of methane gas as an energy source. For the sake of all of us, our communities, and world, the sooner the better. This abomination is different. There is no time to waste.

### 1NC – Drones

#### Loss of satellites shuts down drones

Daniel Ventre 11, Engineer for CNRS and Researcher for CESDIP, Cyberwar and Information Warfare, p. 198-199

The introduction of cyberspace operations is part of a specific context; a major evolution in the operation environment and the nature of the conflicts, which make irregular wars the rule, and make regular actors the exception to the rule. But the battle against unconventional, non-state governed, irregular actors raises specific problems: there are multiple actors, unpredictable at that, who do not abide by the same rules. New orders in conflicts are imposing the implementation of an ever more important need for information, and information collection and processing. Networks now have an incredible importance. The document refers to the growing threats against American heritage: the USA is a target and the increasing amount of attacks against their networks is indeed the proof of this. There are many obstacles which need to be removed before they can achieve real superiority and freedom to act, especially as vulnerable points may originate within the very operations of the armed forces. An example of this is the vulnerability of using products (software and hardware), commercial products (off-the-shelf), and sometimes even foreign products123. This brings to mind the fact that the US Air Force uses commercial, even foreign, applications for its cyberspace operations.

Information space extends to space124, particularly via communication and observation satellites125. Satellites are the keystone to the cyberspace and communication systems, but also the security system: monitoring (Echelon network is the symbol), observation, communication. These are at the heart of the C4ISR systems, without which a concept such as network-centric warfare could not exist. There would be no drones without satellites. It is even a question of extending the Internet to extra-atmospheric space. Projects in this vein (Interplanetary Networks) were being formed in the 1990s, but ran into several technical difficulties (delays in important transmissions due to high distances and costs) [GEL 06]. NASA dedicates a few pages on its website to this project126. The development of communication systems based on the infrastructures in extra-atmospheric space will also raise questions for legal, geopolitical and geostrategic domains: questions of seizing this space, questions of regulation of human activity in this space, of sovereignty, new territoriality and independence.

#### Drones escalate every hotspot.

Zenko and Kreps 14 Micah - Douglas Dillon fellow in the Center for Preventive Action at the Council on Foreign Relations, PhD in political science from Brandeis University; \*Sarah - Stanton nuclear security fellow at the Council on Foreign Relations, assistant professor in the department of government and an adjunct professor at Cornell Law School, BA from Harvard University, MSc from Oxford University, and PhD from Georgetown University; “Limiting Armed Drone Proliferation," Council on Foreign Relations, June 2014, http://aspheramedia.com/wp-content/uploads/2014/12/Limiting\_Armed\_Drone\_Proliferation\_CSR69.pdf

The inherent advantages of drones will not alone make traditional interstate warfare more likely—such conflicts are relatively rare anyway, with only one active interstate conflict in both 2012 and 2013.20 Nor will the probable type, quantity, range, and lethality of armed drones that states possess in coming decades make a government more likely to attempt to defeat an opposing army, capture or control foreign territory, or remove a foreign leader from power. However, misperceptions over the use of armed drones increase the likelihood of militarized disputes with U.S. allies, as well as U.S. military forces, which could lead to an escalating crisis and deeper U.S. involvement. Though surveillance drones can be used to provide greater stability between countries by monitoring ceasefires or disputed borders, armed drones will have destabilizing consequences. Arming a drone, whether by design or by simply putting a crude payload on an unarmed drone, makes it a weapon, and thereby a direct national security threat for any state whose border it breaches. Increased Frequency of Interstate and Intrastate Force For the United States, drones have significantly reduced the political, diplomatic, and military risks and costs associated with the use of military force, which has led to a vast expansion of lethal operations that would not have been attempted with other weapons platforms. Aside from airstrikes in traditional conflicts such as Libya, Iraq, and Afghanistan—where one-quarter of all International Security Assistance Force (ISAF) airstrikes in 2012 were conducted by drones—the United States has conducted hundreds in non-battlefield settings: Pakistan (approximately 369), Yemen (approximately 87), Somalia (an estimated 16), and the Philippines (at least 1, in 2006).21 Of the estimated 473 non-battlefield targeted killings undertaken by the United States since November 2002, approximately 98 percent were carried out by drones. Moreover, despite maintaining a “strong preference” for capturing over killing suspected terrorists since September 2011, there have been only 3 known capture attempts, compared with 194 drone strikes that have killed an estimated 1,014 people, 86 of whom were civilians.22 Senior U.S. civilian and military officials, whose careers span the pre– and post–armed drone era, overwhelmingly agree that the threshold for the authorization of force by civilian officials has been significantly reduced. Former secretary of defense Robert Gates asserted in October 2013, for example, that armed drones allow decision-makers to see war as a “bloodless, painless, and odorless” affair, with technology detaching leaders from the “inevitably tragic, inefficient, and uncertain” consequences of war.23 President Barack Obama admitted in May 2013 that the United States has come to see armed drones “as a cure-all for terrorism,” because they are low risk and instrumental in “shielding the government” from criticisms “that a troop deployment invites.”24 Such admissions from leaders of a democratic country with a system of checks and balances point to the temptations that leaders with fewer institutional checks will face. President Obama and his senior aides have stated that the United States is setting precedents with drones that other states may emulate.25 If U.S. experience and Obama’s cautionary words are any guide, states that acquire armed drones will be more willing to threaten or use force in ways they might not otherwise, within both interstate and intrastate contexts. States might undertake cross-border, interstate actions less discriminately, especially in areas prone to tension. As is apparent in the East and South China Seas, nationalist sentiments and the discovery of untapped, valuable national resources can make disputes between countries more likely. In such contested areas, drones will enable governments to undertake strike missions or probe the responses of an adversary—actions they would be less inclined to take with manned platforms. According to the Central Intelligence Agency (CIA), there are approximately 430 bilateral maritime boundaries, most of which are not defined by formal agreements between the affected states.26 Beyond the cases of East Asia, other cross-border flashpoints for conflict where the low-risk proposition of drone strikes would be tempting include Russia in Georgia or Ukraine, Turkey in Syria, Sudan within its borders, and China on its western periphery. In 2013, a Chinese counternarcotics official revealed that his bureau had considered attempting to kill a drug kingpin named Naw Kham, who was hiding in a remote region in northeastern Myanmar, by using a drone carrying twenty kilograms of dynamite. “The plan was rejected, because the order was to catch him alive,” the official recalled.27 With armed drones, China might make the same calculation that the United States has made—that killing is more straightforward than capturing—in choosing to target ostensibly high-threat individuals with drone strikes. China’s demonstrated willingness to employ armed drones against terrorists or criminals outside its borders could directly threaten U.S. allies in the region, particularly if the criterion China uses to define a terrorist does not align with that of the United States or its allies. Domestically, governments may use armed drones to target their perceived internal enemies. Most emerging drone powers have experienced recent domestic unrest. Turkey, Russia, Pakistan, and China all have separatist or significant opposition movements (e.g., Kurds, Chechens, the Taliban, Tibetans, and Uighurs) that presented political and military challenges to their rule in recent history. These states already designate individuals from these groups as “terrorists,” and reserve the right to use force against them. States possessing the lower risk—compared with other weapons platforms—capability of armed drones could use them more frequently in the service of domestic pacification, especially against time-sensitive targets that reside in mountainous, jungle, or other inhospitable terrain. Compared with typical methods used by military and police forces to counter insurgencies, criminals, or terrorists—such as ground troops and manned aircraft— unmanned drones provide significantly greater real-time intelligence through their persistent loiter time and responsiveness to striking an identified target. Increased Risk of Misperception and Escalation Pushing limits in already unstable regions is complicated by questions raised regarding rules of engagement: how would states respond to an armed drone in what they contend is their sovereign airspace, and how would opposing sides respond to counter-drone tactics? Japanese defense officials claim that shooting down Chinese drones in what Japan contends is its airspace is more likely to occur than downing manned aircraft because drones are not as responsive to radio or pilot warnings, thereby raising the possibility of an escalatory response.28 Alternatively, Japan might misidentify a Chinese manned fighter as an advanced drone and fire on it, especially if the aircraft’s radar signature is not sufficiently distinctive or if combat drones routinely fly over the disputed area. Thus, the additional risks associated with drone strikes, combined with the lack of clarity on how two countries would react to an attempted downing of a drone, create the potential for miscalculation and subsequent escalation. As U.S. Air Force commanders in South Korea noted, a North Korean drone equipped with chemical agents would not have to kill many or even any people on the peninsula to terrorize the population and escalate tensions.29 This scenario points to the spiraling escalatory dynamic that could be repeated—likely intensified in the context of armed drones—in other tension-prone areas, such as the Middle East, South Asia, and Central and East Africa, where the mix of low-risk and ambiguous rules of engagement is a recipe for escalation. Not all of these contingencies directly affect U.S. interests, but they would affect treaty allies whose security the United States has an interest in maintaining. Compared with other weapons platforms, current practice repeatedly demonstrates that drones make militarized disputes more likely due to a decreased threshold for the use of force and an increased risk of miscalculation. Increased Risk of Lethality The proliferation of armed drones will increase the likelihood of destabilizing or devastating one-off, high-consequence attacks. In March 2013, Senator Dianne Feinstein (D-CA) observed of drones: “In some respects it’s a perfect assassination weapon. . . . Now we have a problem. There are all these nations that want to buy these armed drones. I’m strongly opposed to that.”30 The worst-case contingency for the use of armed drones, albeit an unlikely circumstance, would be to deliver weapons of mass destruction. Drones are, in many ways, the perfect vehicle for delivering biological and chemical agents.31 A WMD attack, or even the assassination of a political leader, another troubling though unlikely circumstance, would have tremendous consequences for regional and international stability. Deterring such drone-based attacks will depend on the ability of the United States and other governments to accurately detect and attribute them. Technical experts and intelligence analysts disagree about the extent to which this will be possible, but the difficulties lie in the challenges of detecting drones (they emit small radar, thermal, and electron signatures, and can fly low), determining who controlled it (they can be programmed to fly to a preset GPS coordinate), or assigning ownership to a downed system (they can be composed of commercial, off-the-shelf components).32 It is equally noteworthy that civilian officials or military commanders have almost always used armed drones in ways beyond their initially intended applications. Drones do not simply fulfill existing mission requirements; they create new and unforeseen ones, and will continue to do so in the future. Furthermore, U.S. officials would be misguided to view future uses of armed drones solely through the prism of how the United States has used them—for discrete military operations in relatively benign air-defense environments. The potential for misperception is compounded by the fact that few governments seeking or acquiring armed drones have publicly articulated any strategy for how they will likely use them. Conversely, the uncertainty about how other countries will use drones provides the United States with an opportunity to shape drone doctrines, especially for U.S. allies interested in procuring drones from U.S. manufacturers.