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# 1NC – Preciado

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#### Welcome to the age of pharmacopornographic biocapitalism – post-Fordism has exposed the processes of capital that turn concepts of femininity and sex into estrogen and Viagra. Subjects are no longer subjectivities, but rather defined through the substances that metabolize bodies into “real” agents – the 1AC’s dedication to these “drugs” is simply an arm that produces these “subjectivities” to mass produce them on a global scale

Preciado 08. Paul Preciado (Spanish philosopher, queer theorist, and king), 2008, “Testo Junkie,” translated by Bruce Benderson, I have a pdf, if you need it, sean!

From an economic perspective, the transition toward a third form of capitalism, after the slave-dependent and industrial systems, is generally situated somewhere in the 1970s; but the establishment of a new type of “government of the living”3 had already emerged from the urban, physical, psychological, and ecological ruins of World War II—or, in the case of Spain, from the Civil War. How did sex and sexuality become the main objects of political and economic activity? Follow me: The changes in capitalism that we are witnessing are characterized not only by the transformation of “gender,” “sex,” “sexuality,” “sexual identity,” and “pleasure” into objects of the political management of living (just as Foucault had suspected in his biopolitical description of new systems of social control), but also by the fact that this management itself is carried out through the new dynamics of advanced technocapitalism, global media, and biotechnologies. During the Cold War, the United States put more money into scientific research about sex and sexuality than any other country in history. The application of surveillance and biotechnologies for governing civil society started during the late 1930s: the war was the best laboratory for molding the body, sex, and sexuality. The necropolitical techniques of the war will progressively become biopolitical industries for producing and controlling sexual subjectivities. Let us remember that the period between the beginning of World War II and the first years of the Cold War constitutes a moment without precedent for women’s visibility in public space as well as the emergence of visible and politicized forms of homosexuality in such unexpected places as, for example, the American army.4 Alongside this social development, American McCarthyism—rampant throughout the 1950s—added to the patriotic fight against communism the persecution of homosexuality as a form of antinationalism while at the same time exalting the family values of masculine labor and domestic maternity.5 Meanwhile, architects Ray and Charles Eames collaborated with the American army to manufacture small boards of molded plywood to use as splints for mutilated appendages. A few years later, the same material was used to build furniture that came to exemplify the light design of modern American disposable architecture.6 During the twentieth century, the “invention” of the biochemical notion of the hormone and the pharmaceutical development of synthetic molecules for commercial uses radically modified traditional definitions of normal and pathological sexual identities. In 1941, the first natural molecules of progesterone and estrogens were obtained from the urine of pregnant mares (Premarin) and soon after synthetic hormones (Norethindrone) were commercialized. The same year, George Henry carried out the first demographic study of “sexual deviation,” a quantitative study of masses known as Sex Variants. 7 The Kinsey Reports on human sexual behavior (1948 and 1953) and Robert Stoller’s protocols for “femininity” and “masculinity” (1968) followed in sexological suit. In 1957, the North American pedo-psychiatrist John Money coined the term “gender,” differentiating it from the traditional term “sex,” to define an individual’s inclusion in a culturally recognized group of “masculine” or “feminine” behavior and physical expression. Money famously affirms that it is possible (using surgical, endocrinological, and cultural techniques) to “change the gender of any baby up to 18 months.”8 Between 1946 and 1949 Harod Gillies was performing the first phalloplastic surgeries in the UK, including work on Michael Dillon, the first female-to-male transsexual to have taken testosterone as part of the masculinization protocol.9 In 1952, US soldier George W. Jorgensen was transformed into Christine, the first transsexual person discussed widely in the popular press. During the early 50s and into the 60s, physician Harry Benjamin systematized the clinical use of hormonal molecules in the treatment of “sex change” and defined “transsexualism,” a term first introduced in 1954, as a curable condition.10 The invention of the contraceptive pill, the first biochemical technique enabling the separation between heterosexual practice and reproduction, was a direct result of the expansion of endocrinological experimentation, and triggered a process of development of what could be called, twisting the Eisenhower term, “the sex-gender industrial complex.”11 In 1957, Searle & Co. commercialized Enovid, the first contraceptive pill (“the Pill”) made of a combination of mestranol and norethynodrei. First promoted for the treatment of menstrual disorders, the Pill was approved for contraceptive use four years later. The chemical components of the Pill would soon become the most used pharmaceutical molecules in the whole of human history.12 The Cold War was also a period of transformation of the governmental and economic regulations concerning pornography and prostitution. In 1946, elderly sex worker and spy Martha Richard convinced the French government to declare the “maison closes” illegal, which ended the nineteenth-century governmental system of brothels in France. In 1953, Hugh Hefner founded Playboy, the first North American “porn” magazine to be sold at newspaper stands, with a photograph of Marilyn Monroe naked as the centerfold of the first publication. In 1959, Hefner transformed an old Chicago house into the Playboy Mansion, which was promoted within the magazine and on television as a “love palace” with thirty-two rooms, becoming soon the most popular American erotic utopia. In 1972, Gerard Damiano produced Deep Throat. The film, starring Linda Lovelace, was widely commercialized in the US and became one of the most watched movies of all times, grossing more than $600 million. From this time on, porn film production boomed, from thirty clandestine film producers in 1950 to over 2,500 films in 1970. If for years pornography was the dominant visual technology addressed to the male body for controlling his sexual reaction, during the 1950s the pharmaceutical industry looked for ways of triggering erection and sexual response using surgical and chemical prostheses. In 1974, Soviet Victor Konstantinovich Kalnberz patented the first penis implant using polyethylene plastic rods as a treatment for impotency, resulting in a permanently erect penis. These implants were abandoned for chemical variants because they were found to be “physically uncomfortable and emotionally disconcerting.” In 1984 Tom F. Lue, Emil A. Tanaghoy, and Richard A. Schmidt implanted a “sexual pacemaker” in the penis of a patient. The contraption was a system of electrodes inserted close to the prostate that permited an erection by remote control. The molecule of sildenafil (commercialized as Viagra© by Pfizer laboratories in 1988) will later become the chemical treatment for “erectile dysfunction.” During the Cold War years psychotropic techniques first developed within the military were extended to medical and recreational uses for the civil population. In the 1950s, the United States Central Intelligence Agency performed a series of experiments involving electroshock techniques as well as psychedelic and hallucinogen drugs as part of a program of “brainwashing,” military interrogation, and psychological torture. The aim of the experimental program of the CIA was to identify the chemical techniques able to directly modify the prisoner’s subjectivity, inflecting levels of anxiety, dizziness, agitation, irritability, sexual excitement, or fear.13 At the same time, the laboratories Eli Lilly (Indiana) commercialized the molecule called Methadone (the most simple opiate) as an analgesic and Secobarbital, a barbiturate with anaesthetic, sedative, and hypnotic properties conceived for the treatment of epilepsy, insomnia, and as an anaesthetic for short surgery. Secobarbital, better known as “the red pill” or “doll,” became one of the drugs of the rock underground culture of the 1960s.14 In 1977, the state of Oklahoma introduced the first lethal injection composed of barbiturates similar to “the red pill” to be used for the death penalty.15 The Cold War military space race was also the site of production of a new form of technological embodiment. At the start of the 60s, Manfred E. Clynes and Nathan S. Kline used the term “cyborg” for the first time to refer to an organism technologically supplemented to live in an extraterrestrial environment where it could operate as an “integrated homeostatic system.”16 They experimented with a laboratory rat, which received an osmotic prosthesis implant that it dragged along—a cyber tail. Beyond the rat, the cyborg named a new techno-organic condition, a sort of “soft machine”17 (to use a Burroughs term) or a body with “electric skin” (to put it in Haus-Rucker & Co. terms) subjected to new forms of political control but also able to develop new forms of resistance. During the 1960s, as part of a military investigation program, Arpanet was created; it was the predecessor of the global Internet, the first “net of nets” of interconnected computers capable of transmitting information. On the other hand, the surgical techniques developed for the treatment of “les geules cassées” of the First World War and the skin reconstruction techniques specially invented for the handling of the victims of the nuclear bomb will be transformed during the 1950s and 1960s into cosmetic and sexual surgeries.18 In response to the threat inferred by Nazism and racist rhetoric, which claims that racial or religious differences can be detected in anatomical signs, “de-circumcision,” the artificial reconstruction of foreskin, was one of the most practiced cosmetic surgery operations in the United States.19 At the same time, facelifts, as well as various other cosmetic surgery operations, became massmarket techniques for a new middle-class body consumer. Andy Warhol had himself photographed during a facelift, transforming his own body into a bio-pop object. Meanwhile, the use of a viscous, semi-rigid material that is waterproof, thermally and electrically resistant, produced by artificial propagation of carbon atoms in long chains of molecules of organic compounds derived from petroleum, and whose burning is highly polluting, became generalized in manufacturing the objects of daily life. DuPont, who pioneered the development of plastics from the 1930s on, was also implicated in nuclear research for the Manhattan project.20 Together with plastics, we saw the exponential multiplication of the production of transuranic elements (the chemical elements with atomic numbers greater than 92—the atomic number of Uranium), which became the material to be used in the civil sector, including plutonium, that had, before, been used as nuclear fuel in military operations.21 The level of toxicity of transuranic elements exceeds that of any other element on earth, creating a new form of vulnerability for life. Cellulosic, polynosic, polyamide, polyester, acrylic, polypylene, spandex, etc., became materials used equally for body consumption and architecture. The mass consumption of plastic defined the material conditions of a large-scale ecological transformation that resulted in destruction of other (mostly lower) energy resources, rapid consumption, and high pollution. The Trash Vortex, a floating mass the size of Texas in the North Pacific made of plastic garbage, was to become the largest water architecture of the twenty-first century.22 We are being confronted with a new kind of hot, psychotropic, punk capitalism. Such recent transformations are imposing an ensemble of new microprosthetic mechanisms of control of subjectivity by means of biomolecular and multimedia technical protocols. Our world economy is dependent on the production and circulation of hundreds of tons of synthetic steroids and technically transformed organs, fluids, cells (techno-blood, techno-sperm, technoovum, etc.), on the global diffusion of a flood of pornographic images, on the elaboration and distribution of new varieties of legal and illegal synthetic psychotropic drugs (e.g., bromazepam, Special K, Viagra, speed, crystal, Prozac, ecstasy, poppers, heroin), on the flood of signs and circuits of the digital transmission of information, on the extension of a form of diffuse urban architecture to the entire planet in which megacities of misery are knotted into high concentrations of sex-capital.23 These are just some snapshots of a postindustrial, global, and mediatic regime that, from here on, I will call pharmacopornographic. The term refers to the processes of a biomolecular (pharmaco) and semiotic-technical (pornographic) government of sexual subjectivity—of which “the Pill” and Playboy are two paradigmatic offspring. Although their lines of force may be rooted in the scientific and colonial society of the nineteenth century, their economic vectors become visible only at the end of World War II. Hidden at first under the guise of a Fordist economy, they reveal themselves in the 1970s with the gradual collapse of this phenomenon. During the second half of the twentieth century, the mechanisms of the pharmacopornographic regime are materialized in the fields of psychology, sexology, and endocrinology. If science has reached the hegemonic place that it occupies as a discourse and as a practice in our culture, it is because, as Ian Hacking, Steve Woolgar, and Bruno Latour have noticed, it works as a material-discoursive apparatus of bodily production.24 Technoscience has established its material authority by transforming the concepts of the psyche, libido, consciousness, femininity and masculinity, heterosexuality and homosexuality, intersexuality and transsexuality into tangible realities. They are manifest in commercial chemical substances and molecules, biotype bodies, and fungible technological goods managed by multinationals. The success of contemporary technoscientific industry consists in transforming our depression into Prozac, our masculinity into testosterone, our erection into Viagra, our fertility/sterility into the Pill, our AIDS into tritherapy, without knowing which comes first: our depression or Prozac, Viagra or an erection, testosterone or masculinity, the Pill or maternity, tritherapy or AIDS. This performative feedback is one of the mechanisms of the pharmacopornographic regime. Contemporary society is inhabited by toxic-pornographic subjectivities: subjectivities defined by the substance (or substances) that supply their metabolism, by the cybernetic prostheses and various types of pharmacopornographic desires that feed the subject’s actions and through which they turn into agents. So we will speak of Prozac subjects, cannabis subjects, cocaine subjects, alcohol subjects, Ritalin subjects, cortisone subjects, silicone subjects, heterovaginal subjects, double-penetration subjects, Viagra subjects, $ subjects . . . There is nothing to discover in nature; there is no hidden secret. We live in a punk hypermodernity: it is no longer about discovering the hidden truth in nature; it is about the necessity to specify the cultural, political, and technological processes through which the body as artifact acquires natural status. The oncomouse,25 the laboratory mouse biotechnologically designed to carry a carcinogenic gene, eats Heidegger. Buffy kills the vampire of Simone de Beauvoir. The dildo, a synthetic extension of sex to produce pleasure and identity, eats Rocco Siffredi’s cock. There is nothing to discover in sex or in sexual identity; there is no inside. The truth about sex is not a disclosure; it is sexdesign. Pharmacopornographic biocapitalism does not produce things. It produces mobile ideas, living organs, symbols, desires, chemical reactions, and conditions of the soul. In biotechnology and in pornocommunication there is no object to be produced. The pharmacopornographic business is the invention of a subject and then its global reproduction.

#### Why do we have drugs for erections but not malaria? Biocapitalism and the pharmaceutical industry invent sickness, illness, and the drugs themselves that create the affective subjectivities that sustain the entire structure

Preciado 2. Paul Preciado (Spanish philosopher, queer theorist, and king), 2008, “Testo Junkie,” translated by Bruce Benderson, I have a pdf, if you need it, sean!

Within the context of biocapitalism, an illness is the conclusion of a medical and pharmaceutical model, the result of a technical and institutional medium that is capable of explaining it discursively, of realizing it and of treating it in a manner that is more or less operational. From a pharmacopornopolitical point of view, a third of the African population infected with HIV isn’t really sick. The thousands of seropositive people who die each day on the continent of Africa are precarious bodies whose survival has not yet been capitalized as bioconsumers/producers by the Western pharmaceutical industry. For the pharmacopornographic system, these bodies are neither dead nor living. They are in a prepharmacopornographic state or their life isn’t likely to produce an ejaculatory benefit, which amounts to the same thing. They are bodies excluded from the technobiopolitical regime. The emerging pharmaceutical industries of India, Brazil, or Thailand are fiercely fighting for the right to distribute their antiretrovirus therapies. Similarly, if we are still waiting for the commercialization of a vaccine for malaria (a disease that was causing five million deaths a year on the continent of Africa), it is partly because the countries that need it can’t pay for it. The same Western multinational companies that are launching costly programs for the production of Viagra or new treatments for prostate cancer would never invest in malaria. If we do not take into account calculations about pharmacopornographic profitability, it becomes obvious that erectile dysfunction and prostate cancer are not at all priorities in countries where life expectancies for human bodies stricken by tuberculosis, malaria, and AIDS don’t exceed the age of fifty-five.43 In the context of pharmacopornographic capitalism, sexual desire and illness are produced and cultivated on the same basis: without the technical, pharmaceutical, and mediatic supports capable of materializing them, they don’t exist. We are living in a toxopornographic era. The postmodern body is becoming collectively desirable through its pharmacological management and audiovisual advancement: two sectors in which the United States holds—for the moment but, perhaps not for long—worldwide hegemony. These two forces for the creation of capital are dependent not on an economy of production, but on an economy of invention. As Philippe Pignare has pointed out, “The pharmaceutical industry is one of the economic sectors where the cost of research and development is very high, whereas the manufacturing costs are extremely low. Unlike in the automobile industry, nothing is easier than reproducing a drug and guaranteeing its chemical synthesis on a massive scale, but nothing is more difficult or more costly than inventing it.”44 In the same way, nothing costs less, materially speaking, than filming a blowjob or vaginal or anal penetration with a video camera. Drugs, like orgasms and books, are relatively easy and inexpensive to fabricate. The difficulty resides in their conception and political dissemination.45 Pharmacopornographic biocapitalism does not produce things. It produces movable ideas, living organs, symbols, desires, chemical reactions, and affects. In the fields of biotechnology and pornocommunication, there are no objects to produce; it’s a matter of inventing a subject and producing it on a global scale.

#### From the invention of the Pill throughout the 20th century, even as it shifts from the state to multinational corporations, medical innovation is intrinsically linked to colonial biocapitalism

Preciado 3. Paul Preciado (Spanish philosopher, queer theorist, and king), 2008, “Testo Junkie,” translated by Bruce Benderson, I have a pdf, if you need it, sean!

From the beginning of the experimental trials with hormones, the challenge was how to switch from animals to human subjects confined to institutions and finally to the general population. As McCormick infamously said, in stressing the connection between imprisonment and scientific control, the key issue was to find a “cage of ovulating females”: “Human females are not easy to investigate as are rabbits in cages. The latter can be intensively controlled all the time, whereas the human females leave town at unexpected times so cannot be examined at a certain period; and they also forget to take the medicine sometimes—in which case the whole experiment has to begin over again, —for scientific accuracy must be maintained or the resulting data are worthless.” (emphasis in text)61 For Pincus, the island of Puerto Rico offered the most accessible and most easily monitored population pool that McCormick could ever want: the island itself was already a hermetic cage. Puerto Rican women were considered to be not only as docile as laboratory animals, but also as poor and uneducated and therefore an exemplary group: if they could follow the regimen involved in taking the Pill, any white American woman could do the same. The island of Puerto Rico itself was treated as an extended, nonwhite, female body to which the Pill was administered in terms of what Foucault called “urban therapeutics.”62 As historians of medicine Jordan Goodman, Anthony McElligot, and Lara Marks have shown, Puerto Rico’s trials are not an exception but rather belong to a larger history of colonial and hygienist scientific experimentation involving humans that occurred during the twentieth century: “Doctors and biohygenists became the determinators of a bioracially constituted state; they saw themselves as its gatekeepers and guardians, programmed with the mission to secure a utopian healthy society.”63 However, after World War II, with the scandals of Nazi medicine and the Nuremberg Code,64 the role of the state in pharmacological and medical experimentation became less clearly visible, as this experimentation moved from state institutions to industrial pharmacological companies. As part of a larger mutation from a disciplinary to a pharmacopornographic regime, “research became ‘de-centered’ as it became more commercialized, and moved beyond the immediate sphere of the state or state-related agencies and transcended national borders, borne on the wings of multinational corporations.”65 The birth control programs tested in Puerto Rico clearly show the complicity between national eugenic programs and private pharmacological interests before the war and the transition from the colonial and state model to the postcolonial and neoliberal multinational model of drug production and population control after the 1940s.

#### The alternative is voluntary auto-intoxication – this performative act of communal self administration of chemical prosthesis both preserves liberation strategies in bodily practices and disrupts biocapitalist control over subjectivity

Preciado 4 Paul Preciado (Spanish philosopher, queer theorist, and king), 2008, “Testo Junkie,” translated by Bruce Benderson, I have a pdf, if you need it, sean!

The first principle of a trans-feminism movement capable of facing porno-punk modernity: the fact that your body, the body of the multitude and the pharmacopornographic networks that constitute them are political laboratories, both effects of the process of subjection and control and potential spaces for political agency and critical resistance to normalization. I am pleading here for an array of politics of physical experimentation and semiotechnology that (in the face of the principle of political representation, which dominates our social life and is at the core of political mass movements, which can be as totalitarian as they are democratic) will be regulated by the principle that—in accordance with Peter Sloterdijk’s intuitions—I will call the “principle of the auto-guinea pig.”12 In China, in 213 BC, all books were burned by order of the emperor. In the fifth century, after a series of wars had ransacked and decimated the library at Alexandria, it was accused of harboring pagan teachings contrary to the Christian faith and was destroyed by the decree of Emperor Theodosius. The greatest center of research, translation, and reading disappeared. Between 1330 and 1730, thousands of human bodies were burned during the Inquisition, thousands of books were destroyed, and hundreds of works related to the expertise and production of subjectivity were relegated to oblivion or to the underground. In 1813, American soldiers took York (now Toronto) and burned the parliament and legislative library. A year later, the Library of Congress was razed. In 1933, one of the first actions of the Nazi government was the destruction of the Institut für Sexualwissenschaft (Institute for Sexual Research) in Berlin. Created in 1919 by Magnus Hirschfeld, this center had for years played a role in the research and dissemination of progressive ideas and practices concerning sex and sexuality. Twenty thousand books from the Hirschfeld Institute were burned on May 10, 1933, on Opernplatz on a gigantic pyre whose flashing flames were imprinted on the camera film of Hitler’s reporters. On the night of March 9, 1943, an air raid on a library in Aachen destroyed five hundred thousand books. In 1993, Croatian militia destroyed dozens of libraries (among them, those in Stolac). In 2003, American bombs and Saddam loyalists sacked and destroyed the National Library of Baghdad13 . . . The theorico-political innovations produced during the past forty years by feminism, the black liberation movement, and queer and transgender theory do seem to be lasting acquisitions. However, in the context of global war, this collection of scholarship could be destroyed also, as fast as a microchip melting under intense heat. Before all the existing fragile archives about feminism and black, queer, and trans culture have been reduced to a state of radioactive shades, it is indispensible to transform such minority knowledge into collective experimentation, into physical practice, into ways of life and forms of cohabitation. We are no longer pleading, like our predecessors in the 1970s and 1980s, for an understanding of life and history as effects of different discursive regimes. We are pleading to use discursive productions as stakeholders in a wider process of the technical materialization of life that is occurring on the planet. A materialization that each day resembles more and more a total technical destruction of all animal, vegetable, and cultural forms of life and that will end, undoubtedly, in the annihilation of the planet and the self-extinction of most of its species. Alas, it will become a matter of finding ways to record a planetary suicide. Until the end of the eighteenth century, self-experimentation was still a part of the research protocols of pharmacology. Animal experimentation was not yet called into question, but an ethical precept dictated that the researcher take on the risk of unknown effects on his or her own body before enacting any test on the body of another human. Relying on the rhetoric of objectivity, the subject of scientific learning would progressively attempt to generate knowledge outside him- or herself, to exempt his or her body from the agonies of self-experimentation. In 1790, the physician Samuel Hahnemann self-administered strong daily doses of quinine in order to observe its effects in fighting malaria. His body reacted by developing symptoms that resembled the remittent fever characteristic of malaria. The experiment would serve as the basis for the invention of the homeopathic movement, which, based on the law of similars, maintains that it is possible to treat illness using minute doses of a substance that, in much larger amounts, would provoke the same symptoms of that illness in a healthy body, in the manner of a therapeutic mirror. Peter Sloterdijk, inspired by Hahnemann, will call the process of controlled and intentional poisoning “voluntary auto-intoxication” and will sum it up as follows: “If you intend to be a doctor, you must try to become a laboratory animal.”14 In order to transform conventional frameworks of the “cultural intelligibility”15 of human bodies, it is necessary to evolve toward practices of voluntary autointoxication. From Novalis to Ritter, the romanticism from which Sloterdijk draws his inspiration for a counterproject to modernity will make autoexperimentation the central technique of the self in a dystopian society. Nevertheless, romantic autoexperimentation carries the risk of individualism and depolitization. On the other hand, two of the discourses around which the critique of modern European subjectivity will develop—those of Sigmund Freud and Walter Benjamin—will begin under the form of the invention of new techniques of the self and repertories of practices of voluntary intoxication. But the dominant discourse of disciplinary modernity will brush them aside; the process of institutionalization that both psychoanalysis and the Frankfurt School will experience will go hand in hand with the pathologizing of intoxication and the clinical industrialization of experimentation. “It would be a good thing if a doctor were able to test many more drugs on himself,” declared the young doctor Mikhail Bulgakov in 1914, in “Morphine,” a text in which the protagonist describes the effects of morphine on his own body.16 Likewise, it seems urgent today, from the perspective of a trans-feminist project, to use our living bodies as biopolitical platforms to test the pharmacopornopolitical effects of synthetic sex hormones in order to create and demarcate new frameworks of cultural intelligibility for gender and sexual subjects. In an era in which pharmaceutical laboratories and corporations and state medico-legal institutions are controlling and regulating the use of gender and sex biocodes (the active molecules of progesterone, estrogen, and testosterone) as well as chemical prostheses, it seems anachronistic to speak of practices of political representation without going through performative and biotechnological experiments on sexual subjectivity and gender. We must reclaim the right to participate in the construction of biopolitical fictions. We have the right to demand collective and “common” ownership of the biocodes of gender, sex, and race. We must wrest them from private hands, from technocrats and from the pharmacoporn complex. Such a process of resistance and redistribution could be called technosomatic communism. As a mode of the production of “common” knowledge and political transformation, the auto–guinea pig principle would be critical in the construction of the practices and discourses of trans-feminism and the coming liberation movements of gender, sexual, racial, and somatic-political minorities. To echo Donna J. Haraway’s expression, it will consist of a positioned, responsible corporal political practice, so that anyone wishing to be a political subject will begin by being the lab rat in her or his own laboratory

#### Thus, the role of the ballot should be to vote for the best strategy of body centric praxis.

## Case

### Adv

#### Innovation high and evergreening is false – postdates your ev and we have stats

Ezell 20. Stephen Ezell, July 2020, “Ensuring U.S. Biopharmaceutical Competitiveness,” Information Technology and Innovation Foundation, <http://www2.itif.org/2020-biopharma-competitiveness.pdf> sean!

Medicines are critical to health. Since 2000, the FDA has approved more than 500 new medicines. 2 As of 2020, biopharmaceutical companies in the United States have more than 3,400 drugs under clinical development, accounting for almost half of the estimated 8,000 medicines under development globally (1,100 of which are being developed to treat various forms of cancers).3 And while some have asserted that biotechnology companies focus too often on “me-too” drugs that compete with other treatments already on the market, the reality is that most of the drugs currently under development seek to tackle some of the world’s most intractable diseases, including Alzheimer’s, cancer, and communicable diseases. This includes 130 coronavirus vaccines under development globally as well as 144 active trials of coronavirus therapeutic agents, and another 457 development programs for new therapeutic agents, which the FDA is tracking through its Coronavirus Treatment Acceleration Program.4 Moreover, such arguments miss that many of the drugs developed in recent years have in fact been first of their kind. For instance, in 2014, the FDA’s Center for Drug Evaluation and Research (CDER) approved 41 new medicines (the most since 1996 at that point), many of which were first-in-class medicines, meaning they represent a possible new pharmacological class for treating a medical condition.5 In that year, 28 of the 41 drugs approved were considered biologic or specialty agents, and 41 percent of medicines approved were intended to treat rare diseases. In 2018, CDER approved a record 59 novel drugs, and in 2019, 48 novel drugs, making 2019 the third-largest approval class in the past 25 years.6 As of 2020, 74 percent of medicines in clinical development in the United States are potentially first-in-class medicines, including 86 percent for Alzheimer’s, 70 percent for various forms of cancer, and 73 percent for cardiovascular diseases

#### Evergreening is a myth – this card ends the debate.

Lietzan 20 [Erika; Professor of Law, University of Missouri School of Law, Research interests in Pharmaceutical Regulation, Device Regulation, Intellectual Property; “The Evergreening Myth Claims that drug innovators extend their patents obscure a radical policy‐​making goal.,” Cato Institute; Fall 2020; <https://www.cato.org/regulation/fall-2020/evergreening-myth>/] Justin

In recent years, U.S. policymakers have considered proposals intended to prevent — or at least reduce — “evergreening” by pharmaceutical companies. Some proposals would change the antitrust enforcement landscape, others the intellectual property landscape, and still others the regulatory framework that governs new medicines. Some proposals — such as those creating new causes of action under the antitrust laws or limiting the availability of patents for discoveries — are profound and their proponents cite a body of academic and policy literature that decries supposed “evergreening” by companies to justify their ideas.

The term “evergreening” is a metaphor, meant to remind audiences of evergreen trees, which have green foliage year‐​round. It implies that something has been extended, and users of the metaphor view this extension as improper or undesirable. When offering descriptions and examples of evergreening, they focus on drug companies continuing to innovate after first introducing a new molecule, and on the broader marketplace for medicines after subsequent innovations have been introduced to the market. But proponents are frustratingly inconsistent and unclear about what, exactly, has been “extended” in these situations. A close look at the regulatory landscape in which continuing pharmaceutical innovation occurs shows that arguments for reform are grounded in myths, such as the myth that pharmaceutical companies continuing to innovate somehow “extend” their patents.

Once the myths of “evergreening” are laid bare, it becomes apparent that proponents of these proposals really want for the government to limit medical innovators to one medical product in the marketplace for each useful new molecule discovered. They are arguing that an innovator should not enjoy an exclusive market — and the resulting advantageous pricing — for innovations that, though discrete and independently satisfying the standard for a patent under U.S. law, stem in some fashion from an earlier innovation for which that innovator separately enjoyed exclusivity and the resulting pricing advantages. Or, at least, that drug innovators should not. This is a radical proposal that merits careful reflection and discussion, and it is not ripe for action. Understanding that this is the true policymaking objective requires unpacking the regulatory landscape and market more carefully, and paying closer attention to word choice, than proponents of reform often do. The Evergreening Allegation In the United States, every new medicinal product requires premarket approval from the Food and Drug Administration. The drug statute refers to approval of a “new drug,” and ambiguity in the term “drug” provides fertile ground for confusion and rhetorical mischief, as discussed later in this article. A firm that wants to market a new drug must prove to the FDA that the drug is safe and effective. Generating this information takes years, beginning with work in the laboratory and on animals, and progressing through several rounds of “clinical” testing in humans. For new molecules, the clinical portion of this research and development program averages six years. The process is also expensive: the Tufts Center for the Study of Drug Development now estimates the average cost of developing a new molecular entity at $2.6 billion. That figure includes average out‐​of‐​pocket costs of $1.4 billion and reflects the cost of unsuccessful projects. Most research and development programs fail. When new drugs are first launched by innovators, they tend to be sold under brand names and protected by patents as well as statutory rights in the data that supported FDA approval (known as “data exclusivity”). Although the pricing of these products may reflect competitive pressure from other branded products, it also reflects the fact that patent rights and statutory data exclusivity delay the launch of cheaper copies. But no more than five years later, and often earlier, the innovator’s competitors may file applications seeking approval of their own products based on the innovator’s research, rather than performing their own. They file what are known as “abbreviated applications” — abbreviated because they omit some, or all, of the research needed to prove safety and effectiveness. Abbreviated applications are much less expensive and time‐​consuming to assemble, and the competitors’ drugs correspondingly much less expensive than the original drugs they copy. When a competitor seeks to market an exact copy through an abbreviated application, we call its drug a “generic” drug. Pharmacists usually dispense generic copies even when doctors prescribe the corresponding branded products by name. Some people use the “evergreening” label when an innovator holds more than one patent protecting its product, especially if some patents expire later than others. More often, though, these people use the label when an innovator introduces a newer version of its own product that is already on the market. These newer products tend to be sold under brand names and protected by their own patents and statutory data exclusivity. Sometimes the innovator also stops selling its older product. If purchasers shift to the innovator’s newer product rather than purchasing cheap copies of the innovator’s older product, some say the innovator has engaged in evergreening. Although the term “evergreening” is a metaphor and signifies an extension of something, proponents of reform proposals do not agree on the particulars of the term’s use. Some say the company has evergreened its invention, its drug, or its product. Others say the company has evergreened the drug’s patent or patent life, or its exclusivity. Some say it has extended the drug’s patents, or the drug’s patent coverage or patent life, or the drug’s exclusivity period. Some say the company has evergreened the drug’s price, or its own profits or monopoly, or the company has extended its market power. Many argue that through evergreening — whatever the term means — the innovator has improperly blocked other firms from competing with it. On this basis, they seek government intervention. For instance, one recent proposal would allow the Federal Trade Commission to bring antitrust actions against innovators who introduced newer products to replace their older products. Three Myths of Evergreening The circumstances that trigger the “evergreening” label occur at the intersection of several complex bodies of law: the federal framework requiring premarket approval of new medicines and their copies, federal intellectual property laws, federal and state laws governing promotion of medicines, and federal laws and practices and state laws relating to prescribing and dispensing medicines. Many who propose aggressive government intervention because of evergreening give short shrift to this landscape, which allows the perpetuation of three myths that distort policymaking discussions. Before reviewing the myths, it will help to understand two points about the framework in which innovators compete with the companies that submit abbreviated applications. First, the FDA approves products, not active ingredients. And second, patents protect inventions, not products. Federal law states that every “new drug” requires an approved application. But at the FDA the term “drug” has more than one meaning. It includes a medicine’s active ingredient, to be sure. But it also includes drug products. A drug product is a medicine in its finished form, meaning the form that will be sold in the market and administered to patients. And the FDA approves a particular product described in a particular application — the specific combination of active and inactive ingredients (often called a drug’s “formulation”), in a particular dosage form (such as capsule or tablet), for a particular route of administration (such as oral or topical), at a particular strength, for particular medical uses (also known as the product’s “indications”), manufactured as described in the application, and accompanied by labeling written for prescribers based on the data in the application. Federal law allows a patent to issue for any new, useful, non‐​obvious invention, including a process, a composition of matter, and an improvement to an existing process or composition of matter. The patent usually expires 20 years after its application date. For any particular drug product approved by the FDA, the innovator might own patents on various types of inventions. The innovator usually owns a patent claiming the product’s active ingredient, and because the innovator generally files this patent before starting clinical trials, it is usually the first to expire. Other inventions protected by patent might include the product’s formulation or a dosage form and dosage of the active ingredient (or formulation). These inventions may emerge later in the premarket development process. If the resulting patent applications refer to the active ingredient patent, the patents will expire when the active ingredient patent expires, but otherwise they will expire later. The innovator may also own other patents claiming inventions embodied in the product, such as a patent claiming methods of using or administering the product, a patent claiming the manufacturing process, or a patent claiming a metabolite of the active ingredient. These, too, could expire later than the first patent — sometimes much later. These two points work together. A single active ingredient associated with a single brand name might be the subject of a half dozen, dozen, or more discrete products. Suppose an active ingredient was formulated into tablets and the innovator sold six strengths. Suppose the innovator also formulated an injectable version, which it sold in two strengths. Suppose it also developed a disintegrating tablet for oral administration, which it sold in four strengths. This innovator would sell 12 discrete products with the same active ingredient and probably (though not necessarily) the same brand name. And because a single product might incorporate many discrete inventions, the patents relevant to one product might differ from the patents relevant to another. Failure to realize this — and its regulatory significance — leads to three myths, as follows.

Myth of evergreening patents / The first myth is that innovators extend their patents. This is legally impossible. In the United States, a patent expires 20 years after its application date.

There are only two ways a patent’s expiration date can shift later in time: (1) When it issues a patent, the U.S. Patent and Trademark Office (PTO) adjusts the expiry date later to compensate for routine delays at the PTO. And (2), if the marketing application proposed a new active ingredient, then if the company asks the PTO for a patent term extension within 60 days of FDA approval, the PTO will use a statutory formula to extend one patent claiming the product to compensate partially for the lapse of patent life during premarket testing and regulatory review. There is no other mechanism by which a patent might be extended. In particular, a patent on one invention — no matter when it expires — does not extend the patent on another invention.

Myth of blocked competitors / The second myth is that when an innovator holds patents that expire after its active ingredient patent, or when it introduces newer products to market, it can prevent its competitors from bringing their copies to market. Instead, once the initial patent and (if applicable) statutory exclusivity on the innovator’s active ingredient have expired, its competitors have substantial freedom to operate. This freedom reflects two facts that are often overlooked.

First, the innovator’s competitor does not have to propose an exact copy. Federal law permits the competitor to rely on the innovator’s research but propose competing products that are not identical. To be sure, a competitor may submit an ANDA for a product that essentially duplicates the innovator’s product — that is, a generic. Ordinarily, the company shows in the ANDA that its product has the same active ingredient, route of administration, dosage form, strength, and labeling as the innovator’s product. The generic must also be “bioequivalent” to the original drug that it references, meaning that its active ingredient must reach the site of action in the body to the same extent and at the same rate as the active ingredient of the referenced product. But even a generic can be a little different. For example, it usually does not need the same inactive ingredients in the same quantities. And the generic competitor need not use the same manufacturing process.

If a competitor wants to offer a different route of administration, dosage form, or strength — for instance, to avoid infringing a patent — it may still be able to use the generic drug approval pathway. It simply files a “suitability petition” asking the FDA’s permission. The agency will approve the petition unless more data are needed to establish the proposed product’s safety and effectiveness. And at this point, the competitor may file an ANDA. More significantly, though, a competitor can always use a different abbreviated application pathway: a “505(b)(2)” application for a product that differs more substantially from the innovator’s product. Although the changes proposed in this hybrid application must be supported by new data, the competitor otherwise relies on the innovator’s data, avoiding the expensive and time‐​consuming research and development process the innovator went through. In addition to using this mechanism to propose modifications that avoid a patent, a competitor might use the mechanism to propose innovations that will offer an advantage in the market — such as changes to the active ingredient and new medical uses.

Second, an abbreviated application cites a specific innovative product, not the active ingredient or brand writ large. The competitor selects one innovative product as the reference product on which it relies — for instance, one of the 12 products in the hypothetical above. Its regulatory burden is tied to that specific product alone. The requirement to show sameness and bioequivalence (for an ANDA) and, critically, the obligation to contend with patents and wait for statutory exclusivity to expire are linked to the one specific product, alone. (In rare circumstances, when filing a hybrid application, a competitor might cite two innovative products, but the same point applies.)

To be sure, the patents associated with the cited innovative product affect when the FDA may approve the abbreviated application. Whether it files an ANDA or a hybrid application, a competitor must address the unexpired patents listed in the FDA’s “Orange Book” for the specific innovative product it has chosen to cite. For each listed patent, it has two choices, and its selection dictates the timing of FDA approval as far as that patent is concerned. The competitor may state the date on which the patent will expire, signaling that it does not plan to market its product until expiry. This precludes final approval of its product until patent expiry. Or it may assert that the patent is invalid or will not be infringed by its product, notifying the innovator of this position. If the innovator sues within 45 days, the drug statute stays final approval of its abbreviated application for 30 months. Under changes to the law made in 2003, though, unless the competitor changes its position on a patent after filing its abbreviated application, approval of its application is stayed only once. At the end of the 30 months, the FDA must approve the abbreviated application if the approval standard is met, even if there is ongoing patent litigation.

Although a competitor using the abbreviated application pathway must contend with the innovator’s patents and approval of its product may be delayed because of those patents, this is true of only the patents associated with the specific product that it references. The competitor does not have to contend with patents associated with other products that happen to contain the same active ingredient or bear the same brand name. Similarly, the competing applicant grapples with only the statutory exclusivity associated with the product it references. The drug statute provides five years of exclusivity in the data supporting new chemical entities and three years of exclusivity for most new products that are not new chemical entities. Separately, if an innovator introduces what the FDA calls a new “condition of approval” — such as a new strength or dosage form — the drug statute may provide three years of exclusivity. This delays approval of abbreviated applications proposing products with the same active ingredient for the same condition of approval. But a competitor that proposed a different strength or dosage form — or that cited a product with a different strength or dosage form (such as the innovator’s original product) — would not need to grapple with that exclusivity.

This debunks the myth that an innovator with later‐​expiring patents and an innovator that introduces newer products can prevent its competitors from bringing copies to market. Instead, competitors have several options. For instance, empirical studies show that competitors file abbreviated applications as early as the law permits them to do so, arguing that the innovator’s patents are invalid or, if applicable, not infringed by the new drug. They tend to lose these arguments when the active ingredient patent is at issue, but they tend to win if a formulation patent is at issue. If a competitor believed it would infringe a patent or feared it would lose the patent infringement suit brought by the innovator, it could seek a license. Settlements of patent litigation between innovators and competitors seeking to market generic copies usually include a license allowing the competitor to bring its product to market earlier than the date of patent expiry. There are also other options.

Once the patent on the active ingredient expires, a competitor can use the ingredient in its own product and file an abbreviated application, relying on the research performed and submitted by the innovator. Even in an ANDA, a true generic application, only the active ingredient must be the same. A competitor may be able to design around patents claiming other aspects of the innovator’s product (such as its strength and route of administration) and still file a true generic application. The competitor would simply file a suitability petition and, upon approval of that petition, a generic application proposing the difference that allowed it to avoid patent infringement. Then it would assert non‐​infringement in its application. If it could not file a generic application (for instance, because the FDA requested data to support the changes made), it could always file a hybrid application. It would still rely on the innovator’s research and it would similarly assert non‐​infringement in its application. In either case, the innovator might not sue if the competitor clearly avoided its patents.

It is thus misleading for advocates of intervention to complain about the number of “patents” associated with a “drug.” A competitor filing an abbreviated application does not copy a “drug” in the broad sense of the term. Accurately describing a company’s freedom to operate in the market would require focusing on discrete products that can serve as references for abbreviated applications and on the number, scope, and breadth of the patent claims held by the innovator for those products. This would tell policymakers more about the market effects of a firm’s innovation and patenting practices than the number of patents associated with a particular brand name or the number of patents associated with the many finished products containing a particular active ingredient.

#### The pharmaceutical industry is more powerful than you think – they’ll privatize the modern nation-state before losing their patents

Preciado 08. Paul Preciado (Spanish philosopher, queer theorist, and king), 2008, “Testo Junkie,” translated by Bruce Benderson, I have a pdf, if you need it, sean!

Contemporary biodrag activism is confronted, fifty years after Agnes, with a new set of violent neoliberal economic and politic strategies, including the privatization of the health system, government deregulation, deep cuts in social spending, and the militarization of social life. In the present context, it’s possible to imagine (at least) two tracks of development for the pharmacopornographic economy in the face of which different modes of activism could be articulated. The first is the preservation of theological-humanist political states that regulate the action of the neoliberal (meaning free trade, either democratic or totalitarian in the context of globalization) pharmacopornographic economy. Current pharmacopornographic corporations would function as free market tentacles inside contemporary nation-states (which would continue to see themselves as sovereign and patriarchal) and would negotiate with them to determine the directives for the production, use, and consumption of chemical prostheses and semiotic gender and sex codes. The second transformation is one into an abstract deterritorialized nation-state of the pharmacopornographic industry. We could also be witnessing a process of privatization of contemporary nation-states, which would be progressively absorbed by the pharmacopornographic industry. This would be the strategy employed by the pharmacopornographic companies to escape pre-1970s regulations imposed by states (to avoid the gradual transformation of pharmaceutical patents into generics, the more or less severe regulation of the production and distribution of pornographic audiovisual material, and attempts to abolish prostitution), as these companies engage in the political direction of new national entities (via the FDA; the International Monetary Fund; the European Union; and the governments of the United States, China, or India) and purchase state institutions (for example, the Department of Health or Department of Justice or the prison-industrial complex) and put them to work to their benefit, refilling such archaic institutions with new content whose only objective would be increasing consumption and pharmacopornographic profits.

#### AMRs:

#### Risk of transmission is overstated—conventional checks solve

Smith 17—former R&D director at MicroPhage and SomaLogic (Drew, “Can A Superbug Cause A Global Pandemic?,” <https://www.forbes.com/sites/quora/2017/02/10/can-a-superbug-cause-a-global-pandemic/#3cb04e2c59aa>, dml)

Death rates from bacterial infections dropped over 90% from historic levels before the introduction of penicillin. Sanitation and vaccines are far more effective methods to control bacterial infections than antibiotics ever were or ever will be. Boring old soap and water, filtration, bleach, and alcohol kill superbugs just fine. None of these things are in short supply.

The acquisition of multiple drug resistances generally (but not always) causes bacteria to become a bit less fit and unable to infect otherwise healthy adults. The victim of this particular superbug was in her seventies and had been in and out of hospitals for over a year. This is a fairly typical profile for victims of multi-drug resistant bacteria.

The worst-case scenario, if we continue to abuse and overuse antibiotics in feedlots and hospitals, is that these bugs will pick up compensatory mutations and become more virulent. Many fairly routine procedures - chemotherapy, thoracic and orthopedic surgery - will become much more risky.

But the risk will still be largely confined to hospitalized patients. MDR bacteria are extremely unlikely to cause a global pandemic on the scale of the 1919 influenza or AIDS epidemics, so long as we continue to provide clean food and water to the public.

#### SQ solves – experiments and action now mean the plan isn’t “key” – none of their uniqueness evidence is specific to antibioitics

Biochemical Society 17 (Biochemical Society, “How to solve a problem like antibiotic resistance”, March 3, 2017, ScienceDaily, https://www.sciencedaily.com/releases/2017/03/170303100429.htm)

There has been much recent talk about how to target the rising tide of antibiotic resistance across the world, one of the biggest threats to global health today. While there is no doubting the size of the problem facing scientists, healthcare professionals and the pharmaceutical industry, there are innovative ways we can target antibiotic resistance in the short term, which are discussed in three articles published in Essays in Biochemistry. With only a few antibiotics in development and a long drug development process (often 10-15 years), there is concern that what is being done to combat antibiotic resistance may be 'too little, too late'. "If bacteria continue developing resistance to multiple antibiotics at the present rate, at the same time as the antibiotic pipeline continues to dry up, there could be catastrophic costs to healthcare and society globally," said senior co-author on one of the articles, Dr Tony Velkov, an Australian National Health and Medical Research Council (NHMRC) Career Development Fellow from Monash University, Victoria, Australia. While any antimicrobial resistance is concerning, the increasing incidence of antibiotic-resistant Gram-negative bacteria has become a particular problem as strains resistant to multiple antibiotics are becoming common and no new drugs to treat these infections (eg, carbapenem-resistant Enterobacteriaceae) will be available in the near future. These Gram-negative bacteria are considered the most critical priority in the list of the 12 families of bacteria that pose the greatest threat to human health that was just released by the World Health Organization. The reasons for the high levels of antimicrobial resistance observed in these critical Gram-negative organisms are explained in another paper in the same issue written by the Guest Editor of the journal, Dr Rietie Venter, University of South Australia, Adelaide, and colleagues. According to the authors, one of the main contributing factors to the increased resistance observed in Gram-negative bacteria is the permeability barrier caused by their additional outer membrane. An innovative strategy that is gaining momentum is the synergistic use of antibiotics with FDA-approved non-antibiotics. Using this novel approach, an FDA-approved non-antibiotic drug is combined with a specific antibiotic that enables it to breach the outer membrane barrier and so restore the activity of an antibiotic. The Monash University authors discuss how combining antibiotics with other non-antibiotic drugs or compounds can boost their effectiveness against Gram-negative 'superbugs'. For example, loperamide, an anti-diarrheal medication sold in most pharmacies, enhances the effectiveness of eight different antibiotics (all in the tetracycline class). In particular, when added to the tetracycline antibiotic minocycline, along with the Parkinson's disease drug benserazide, it significantly increased antibiotic activity against multi-drug resistant Pseudomonas aeruginosa, a causative agent in hospital-acquired infections such as ventilator-associated pneumonia. Polymyxins are a type of antibiotics that target Gram-negative bacterial infections and have traditionally been used as a last resort to treat serious infections such as those caused by Gram-negative 'superbugs' Klebsiella pneumoniae, P. aeruginosa and Acinetobacter baumannii. Resistance to polymyxins is not common, but in late 2015 the first transferable resistance gene to colistin (polymyxin E) was discovered (plasmid-borne mcr-1 gene). This caused significant concerns, as once resistance to polymyxins is established, often no other treatments are available. A number of researchers, including the team based at Monash University, have been testing different combinations of drugs or compounds with polymyxins to try and improve their effectiveness against these bacterial 'superbugs'. "Without new antibiotics in the near future, we must explore innovative approaches to preserve the clinical utility of important last-line antibiotics such as the polymyxins." commented senior co-author on the paper, Professor Jian Li, Head of the Laboratory of Antimicrobial Systems Pharmacology from Monash University, Victoria, Australia. Some interesting findings have ensued, with a number of different combinations having a beneficial effect. Some notable examples that increased antibiotic activity when combined with polymyxin B include: ivacaftor and lumacaftor, two new drugs used to treat cystic fibrosis; and closantel, a drug used to treat parasitic worm infections. Another interesting combination that has shown promise against methicillin-resistant Staphylococcus aureus (MRSA), according to Schneider and co-authors, is combining the antibiotics ampicillin or oxacillin with berberine. Berberine is extracted from the roots, stems and bark of plants such as barberry. In another paper in the same issue of Essays in Biochemistry, Dr Mark Blaskovich, Program Coordinator, Community for Open Antimicrobial Drug Discovery and colleagues from the University of Queensland, Brisbane, Australia, describe the key ways they believe antimicrobial resistance can be targeted. "In the short term, the greatest potential for reducing further development of antimicrobial resistance lies in developing a rapid test that can quickly tell whether or not you have a bacterial infection (as opposed to a viral cold or flu), and whether you really need an antibiotic," commented Blaskovich. "Even better if the test could say what type of bacteria, and what types of antibiotics it is resistant to. You could then treat an infection immediately with the appropriate antibiotic, rather than the trial and error method now used. These tests could be ready within the next 5 years, and would have a huge impact on reducing unnecessary antibiotic use, preserving our existing antibiotics and reducing the spread of antibiotic resistance." Regarding antibiotics in particular, Blaskovich and colleagues describe a number of possible strategies to pursue. The first of which is to improve existing antibiotics. For example, the authors recently created a modified version of the antibiotic vancomycin to increase its potency and reduce its toxic side effects. Another option is to rediscover 'old' antibiotics. In the 1950s and 60s many potential antibiotic drugs were described in the scientific literature, but due to so many choices being available at the time, only some were developed for human use. An example of this is octapeptins, which are newly rediscovered antibiotics that are now being developed to combat Gram-negative 'superbugs'. Repurposing drugs originally developed and approved for other uses has also had some success. In 2005, the Drugs for Neglected Diseases initiative identified fexinadole as a potential treatment for sleeping sickness and it is now undergoing a Phase III trial. This drug had been developed as an antimicrobial in the 1970s, but only reached pre-clinical development. In addition to the above, researchers are looking for new, untested sources of antimicrobial activity to try and develop new drugs. A recent success in this area was, teixobactin, a new antibiotic developed by NovoBiotic Pharmaceuticals, discovered by using an 'iChip' to culture and isolate soil bacteria in situ. A final option, mentioned by Blaskovich and colleagues, is crowdsourcing new antibiotics. Using this approach, the Community for Open Antimicrobial Drug Discovery, is searching for new chemical diversity by searching compounds sourced from academic chemists from around the world. "It's hard to predict which one of these methods will be the most successful in the future, but we really need to be trying all of them to have any chance of overcoming antibiotic resistance," said Blaskovich. "Non-antibiotic strategies are just as important, such as developing vaccines or probiotic therapies to prevent infections, as they can help to reduce the overuse of antibiotics. They will never completely replace antibiotics, but can help to preserve our existing antibiotics so they still work when needed." Overall, these articles and others in the new antimicrobial resistance themed issue of Essays in Biochemistry give us hope that there are viable solutions being developed to this seemingly unsurmountable global problem. It is important that all possible avenues are considered, as some less obvious approaches may end up being sources of future success. Dr Derry Mercer, Principal Scientist at NovaBiotics Ltd, a company that specialises in developing new antimicrobials, commented: "Research and development into new antimicrobials remains a vitally important pursuit for combatting the problem of antibiotic resistance, but alternative approaches to this problem are also urgently needed." He added: "Such methods include those described in the papers in the latest issue of Essays in Biochemistry, as well as vaccine development and bacteriophage therapy, to name a few. Approaches that target microbial virulence, for example targeting biofilms and/or quorum sensing, rather than more traditional directly antimicrobial drugs should also be urgently examined."

#### Disease outbreaks solidifies the Biological Weapons Convention.

Kaufman 10 [Stephen Kaufman, IIP Staff Writer December 10, 2010. Biological Weapons Pact Offers Cooperation Against Pandemics, [http://geneva.usmission.gov/2010/12/10/biological-weapons-pact-offers-cooperation-against-pandemics Accessed 2/8/18](http://geneva.usmission.gov/2010/12/10/biological-weapons-pact-offers-cooperation-against-pandemics%20Accessed%202/8/18)] BBro

Kennedy said the **parties to the BWC** want the arms control and nonproliferation **agreement** to be used to bring together the scientific and health communities, law enforcement professionals and governments in assisting states to develop an integrated approach to any kind of prevention and treatment program for pandemic diseases. “It’s linking up international assistance, and it’s providing the expertise that could conduct the investigations to determine the outbreak. So it’s a whole host of tools at our disposal,” Kennedy said. Along with highlighting the overlap between deliberate and nondeliberate pandemics, the meeting in Geneva discussed the World Health Organization’s (WHO) 2005 International Health Regulations, which require countries to cooperate in the prevention and treatment of diseases. The WHO and BWC, both located in Geneva, have different mandates, but their roles complement one another, Kennedy said. The BWC also established a network of national points of contact in the event of a disease outbreak. Kennedy said there is still a need to help countries better react to pandemic situations by helping them develop their capacities, laws and practices. “It’s plugging gaps. It’s linking up and sharing information, and getting those networks in place” at the local, national and international levels, she said. “**This is achieved through** multilateral **diplomacy**, providing technical assistance to countries and conducting workshops with the help of partner states.” She said the December 6-10 meetings “put us on a very good trajectory” for the Seventh BWC Review Conference, scheduled for Geneva, December 5-22, 2011. The BWC also plans to hold a preparatory conference in April 2011, as well as a series of regional workshops, including in Kenya, Nigeria and Jordan, and additional experts meetings and seminars around the world, she said. The Obama administration is pleased by the level of global interest and hopes soon to see “every single state signed up and fully active in the convention.” “That’s certainly our overarching goal, and I think we’re making progress,” Kennedy said. “This is an arms control regime … and the **implementation** has great benefits for every country around the world.”

#### Solves bioweapons and turns the aff – only the BWC can stop pandemics before vaccines are even necessary

Enemark 10. Christian Enemark (Professor of economics and business at the University of Sydney), 2010, “The role of the Biological Weapons Convention in disease surveillance and response,” The London School of Hygiene and Tropical Medicine, <https://academic.oup.com/heapol/article/25/6/486/583576> sean!

A recent review of 14 international disease surveillance and response programmes identified deficiencies (particularly in the developing world) in the critical areas of health infrastructure, technical resources, and financial and human resources that pose challenges for effectively detecting and responding to disease outbreaks around the globe (Hitchcock et al. 2007: 221–2). Insofar as framing a problem in security terms has the potential to generate greater attention to and financial resources for solving that problem, the partial securitization afforded by discussing disease surveillance and response in a BWC context is a welcome development. Regardless of whether an outbreak occurs naturally or as a result of BW use, there is a detection and response imperative. For this reason, broadly applicable measures aimed at limiting vulnerability to infectious disease threats are a worthwhile area in which to invest financial resources and political attention. Many of the basic measures needed to protect populations against naturally emerging infectious diseases—for example, syndromic surveillance, diagnostics and medical therapies—are the same as would be required to mitigate a biological attack. The Chinese Communist Party leader Mao Zedong recognized this as far back as 1952 when, amidst the controversy over alleged biological attacks by the USA during the Korean War (to be discussed later in this article), he launched China’s first Patriotic Hygiene Campaign. The slogan for the campaign was: ‘Mobilise to promote hygiene, to reduce disease, to raise the level of the people’s health, and to smash the germ warfare of the American imperialists!’ (Huang 2003: 2). More recently, China has stated that the ‘fundamental purpose of disease surveillance is to prevent and control the spread of disease, but it is also important in the prevention of bioterrorism attacks’ (China 2004: 3). This resonates with the view of the WHO (Cosivi 2005: 151): ‘‘Confronted with the potential threat to global health security by the intentional release of biological agents, the World Health Organization ... advocates ‘dual-use’ investment in national, regional and global public health operations and infrastructure for early detection and immediate response. One of the most effective methods of preparedness against deliberate epidemics is to strengthen public health surveillance and response activities for naturally and accidentally occurring diseases.’’ With highly sensitive and well-connected systems for local disease surveillance in place, outbreaks of deadly, contagious diseases could be detected and contained rapidly wherever in the world they occurred. Enhancing disease surveillance sensitivity requires, for example, training clinicians to recognize the signs and symptoms of diseases they would not normally encounter in their medical practices. It also requires expanded local diagnostic capacity worldwide to ensure existing laboratories are not swamped with samples. In a highly interconnected world, there is an inevitable international dimension to public health responses. An outbreak event inside one country is potentially a problem for others, especially if the disease in question is contagious. In East Asia, the need to prioritize public health responses to infectious disease outbreaks spans the region. Poorer countries such as Cambodia, Laos and Myanmar are particularly vulnerable to disease outbreaks occurring in their territory because of a paucity of health resources. Wealthier countries like Japan, Singapore and South Korea are also vulnerable despite the higher standards of health care enjoyed by their citizens. This is largely because the public health systems of these countries, less accustomed to infectious disease threats, are ill-prepared for dealing with the morbidity, mortality and social anxiety burden of an outbreak. In the case of China, the largest and most populous country in East Asia, its vulnerability to such an event stems largely from the fact that health resources are allocated so unevenly as to open up gaps in outbreak response capacity. The region as a whole would be better able to resist infectious disease threats if wealthier countries worked to enhance the outbreak response capacity of poorer countries’ health systems as well as their own. In addition, well-resourced countries closely connected to but outside East Asia, such as the United States and Australia, have an interest in ensuring an outbreak does not spread within and beyond the region. Arguments along these lines are routinely advanced at meetings of international health organizations like the WHO. However, the BWC is increasingly being used as an additional forum for states and NGOs to exchange information and ideas on detecting and responding to disease outbreaks, be they of natural or deliberate origin. In addition to standard arms control provisions banning BW possession and proliferation, Article X of the BWC requires that member states ‘facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes’ (BWC 1972). At the Fourth BWC Review Conference in 1996, member states acknowledged ‘worldwide concern about new, emerging and re-emerging infectious diseases’ and regarded international responses to these as offering ‘opportunities for increased cooperation in the context of Article X application and of strengthening the Convention’ (BWC 1996: 25). The Conference welcomed efforts to establish a system of global monitoring of disease and encouraged member states to support WHO programmes ‘to strengthen national and local programmes of surveillance for infectious diseases and improve early notification, surveillance, control and response capabilities’ (BWC 1996: 25). The 2004 meeting of BWC member states was an opportunity to focus on the details of potential public health capabilities that would be useful in the event of a major disease outbreak, however caused. In one sense, states’ contributions to this meeting consisted simply of reports on what each was doing or would do for foreign policy, humanitarian or self-interest reasons. With respect to recent outbreaks of SARS and avian influenza in East Asia, for example, Japan reported that it had ‘strengthened national response measures, and during these outbreaks, provided medical equipment and medicines, as well as dispatching experts to affected countries’ (Japan 2004). Nevertheless, it was genuinely helpful for individual states to learn more about foreign systems, institutions, laws, policies and capabilities for disease surveillance and response. The message of the USA to other delegates was that the 2004 meeting was an opportunity ‘to share insights that will greatly improve the ability of the international community to respond to dangerous outbreaks of disease, whether naturally occurring or deliberate’ (United States 2004). The South Korean delegate noted (Republic of Korea 2004) that the meeting: ‘‘brought us a better understanding of the diverse systems and mechanisms for the surveillance, detection, diagnosis and combating of infectious diseases and for responding to, investigating and mitigating the effects of alleged use of biological weapons or suspicious outbreaks of disease. As a consequence, we now know more clearly what has to be done and what remains to be done for the improved effectiveness of those systems and mechanisms.’’ Some states, however, were interested in receiving more than just information and ideas. Indonesia, for example, called for enhanced laboratory capacity in developing countries (Indonesia 2004), and Malaysia was adamant that ‘the outcome of all research regarding the surveillance, detection, diagnosis and combating of infectious diseases affecting humans, animals and plants should also be made available to all [BWC] states parties on a non-discriminatory basis’ (Malaysia 2004). China called for wealthier BWC member states to fund improvements in disease surveillance and response in poorer states, and for assistance (in the form of technology, resources and information) to be provided ‘on the basis of equality, cooperation and mutual respect’ (BWC 2004: 21–2). China also suggested that BWC member states share their experiences in disease prevention and control by promoting technological cooperation and personnel exchanges (BWC 2004: 27). Some developed countries seemed receptive to such ideas, with the US representative remarking: ‘We too see utility in the provision of technical assistance... particularly in framing and/or expanding ... national systems of disease surveillance and response’ (United States 2004). Australia in turn took the view that the 2004 meeting of BWC member states had ‘usefully informed initiatives to improve disease surveillance and diagnostic laboratory capacity in the Asia-Pacific region’ (Australia 2004).

#### Bioweapons cause extinction and OW disease

Ochs 02 [Richard, MA in Natural Resource Management 2002 –from Rutgers University and Naturalist at Grand Teton National Park, “BIOLOGICAL WEAPONS MUST BE ABOLISHED IMMEDIATELY,” Jun 9, [http://www.freefromterror.net/other\_articles/abolish.html Accessed 2/8/18](http://www.freefromterror.net/other_articles/abolish.html%20Accessed%202/8/18)] BBro

Of all the weapons of mass destruction, the genetically engineered **biological weapons**, many without a known cure or vaccine, **are an extreme danger** to the continued survival of life on earth. Any perceived military value or deterrence pales in comparison to the great risk these weapons pose just sitting in vials in laboratories. While a "nuclear winter” resulting from a massive exchange of nuclear weapons, could also kill off most of life on earth and severely compromise the health of future generations, they are easier to control. Biological weapons, on the other hand, can get out of control very easily, as the recent anthrax attacks has demonstrated. There is no way to guarantee the security of these doomsday weapons because very tiny amounts can be stolen or accidentally released and then grow or be grown to horrendous proportions. **The Black Death** of the Middle Ages **would be small** in comparison to the potential damage bioweapons could cause. Abolition of chemical weapons is less of a priority because, while they can also kill millions of people outright, their persistence in the environment would be less than nuclear or biological agents or more localized. Hence, chemical weapons would have a lesser effect on future generations of innocent people and the natural environment. Like the Holocaust, once a localized chemical extermination is over, it is over. With nuclear and biological weapons, the killing will probably never end. Radioactive elements last tens of thousands of years and will keep causing cancers virtually forever. Potentially worse than that, bio-engineered agents by the hundreds with no known cure could wreck even greater calamity on the human race than could persistent radiation. AIDS and ebola viruses are just a small example of recently emerging plagues with no known cure or vaccine. Can we imagine hundreds of such plagues? HUMAN **EXTINCTION IS** NOW **POSSIBLE**.

#### Warming:

**No impact – adaptation and resilience**

**Hart 15** – emeritus professor of international affairs at the Norman Paterson School of International Affairs at Carleton University in Ottawa, Canada

(Michael, former official in Canada’s Department of Foreign Affairs, former Fulbright-Woodrow Wilson Center Visiting Research, former Scholar-in-Residence in the School of International Service and a Senior Fellow in the Center for North American Studies at American University in Washington, MA from the University of Toronto, author, editor, or co-editor of more than a dozen books, “Hubris: The Troubling Science, Economics, and Politics of Climate Change”, google books)//cmr

As already noted, the IPCC scenarios themselves **are wildly alarmist**, not only on the basic science but also on the **underlying** economic **assumptions**, which in turn drive the alarmist impacts. The result **cannot withstand critical analysis**. Economists Ian Castles and David Henderson, for example, show the extent to which the analysis is driven by the desire to reach predetermined outcomes.50 Other economists have similarly wondered what purpose was served by pursuing such unrealistic scenarios. It is hard to credit the defense put forward by Mike Hulme, one of the creators of the scenarios, that the IPCC is not engaged in forecasting the future but in creating “plausible” story lines of what might happen under various scenarios.51 Each **scare scenario** is based on linear projections without **any reference to technological developments or adaptation**. If, on a similar linear basis, our Victorian ancestors in the UK, worried about rapid urbanization and population growth in London, had made similar projections, they would have pointed to the looming crisis arising from reliance on horse-drawn carriages and omnibuses; they would have concluded that by the middle of the 20th century, London would be knee-deep in horse manure, and all of the southern counties would be required to grow the oats and hay to feed and bed the required number of horses. Technology progressed and London adapted. **Why should the rest of humanity not be able to do likewise** in the face of a trivial rise in temperature over the course of **more than a century**? The work on physical impacts is **equally over the top**. All the scenarios assume **only negative impacts**, ignore the reality of **adaptation**, and attribute **any and all things bad** to global warming. Assuming the GHG theory to be correct means that its impact would be most evident at night and during the winter in reducing atmospheric heat loss to outer space.52 It would have greater impact in increasing minimum temperatures than in increasing maximum temperatures. Secondary studies, however, generally **ignore this facet** of the hypothesis. The IPCC believes that a warmer world will harm human health due, for example, to increased disease, malnutrition, heat-waves, floods, storms, and cardiovascular incidents. As already noted **there is no basis for the claim about severe-weather-related threats or malnutrition**. The claim about heat-related deaths gained a boost during the summer of 2003 because of the tragedy of some 15,000 alleged heat-related deaths in France as elderly people stayed behind in city apartments without air conditioning while their children enjoyed the heat at the sea shore during the August vacation. Epidemiological studies of so-called "excess" deaths resulting from heat waves are abused to get the desired results. Similar studies of the impact of cold spells show that they are far more lethal than heat waves and that it is much easier to adapt to heat than to cold.53 More fundamentally, this, like most of the alarmist literature, ignores the basics of the AGW hypothesis: the world will not see an exponential increase in summer, daytime heat (and thus more heat waves), but a decrease in night-time and winter cooling, particularly at higher latitudes and altitudes. Based on the AGW hypothesis, Canada, China, Korea, Northern Europe, Australia, New Zealand, South Africa, Chile, and Argentina will see warmer winters and warmer nights. There are clear benefits to such a development, even if there may also be problems, but the AGW industry tends to ignore the positive aspects of their alarmist scenarios. The feared spread of malaria, a much repeated claim, is largely unrelated to climate. Malaria’s worst recorded outbreak **was in Siberia long before there was any discussion of AGW**. Similarly, the building of the Rideau Canal in Ottawa in the 1820s was severely hampered by outbreaks of malaria due to the proximity of mosquito-infested wetlands in the area. Malaria remains widespread in tropical countries today in part because of the UN’s lengthy embargo on the use of DDT, the legacy of an earlier alarmist disaster. Temperature is but one factor, and a minor one at that, in the multiple factors that affect the rise or decline in the presence of disease-spreading mosquitoes. Wealthier western countries have pursued public health strategies that have reduced the incidence of the dis- ease in their countries. Entomologist Paul Reiter, widely recognized as the leading specialist on malaria vectors and a contributor to some of the early work of the IPCC, was aghast to learn how his careful and systematic analysis of the potential impacts had been twisted in ways that he could not endorse. In a recent paper, he concludes: “Simplistic reasoning on the future prevalence of malaria is ill-founded; malaria is not limited by climate in most temperate regions, nor in the tropics, and in nearly all cases, ’new' malaria at high altitudes is well below the maximum altitudinal limits for transmission. Future changes in climate may alter the prevalence and incidence of the disease, but obsessive emphasis on ’global warming' as a dominant parameter is indefensible; the principal determinants are linked to ecological and societal change, politics and economics.”54 **Catastrophic species loss** similarly has **little foundation in past experience**.55 Even if the GHG hypothesis were to be correct, **its impact would be slow**, **providing significant scope and opportunity for adaptation**, including by ﬂora and fauna. One of the more irresponsible claims was made by a group of UK modelers who fed wildly improbable scenarios and data into their computers and produced the much-touted claim of massive species loss by the end of the century. There are literally **thousands of websites** **devoted to spreading alarm about species loss** and biodiversity. Global warming is **but one of many claimed human threats to the planet’s biodiversity**. The claims, fortunately, are largely hype, based on computer models and the estimate by Harvard naturalist Edward O. Wilson that 27,000 to 100,000 species are lost annually - a figure he advanced purely hypothetically but which has become one of the most persistent of environmental urban myths. The fact is that scientists **have no idea of the extent of the world's ﬂora and fauna**, with estimates ranging from five million to 100 million species, and that there are no reliable data about the rate of loss. By some estimates, 95 percent of the species that ever existed have been lost over the eons, most before humans became major players in altering their environment. A much more credible estimate of recent species loss comes from a surprising source, the UN Environmental Program. It reports that known **species loss is slowing reaching its lowest level in 500 years** in the last three decades of the 20th century, with some 20 reported extinctions despite increasing pressure on the biosphere from growing human population and industrialization.57 The alarmist community has also introduced the scientifically unknown concept of "locally extinct,” often meaning little more than that a species of plant or animal has responded to adverse conditions by moving to more hospitable circumstances, e.g., birds or butterflies becoming more numerous north of their range and disappearing at its extreme southern extent. Idso et al. conclude: “Many species have shown the ability to **adapt rapidly to changes in climate**. Claims that global warming threatens large numbers of species with **extinction** typically rest on a false definition of extinction (the loss of a particular population rather than en- tire species) and **speculation rather than real-world evidence**. The world’s species have proven **very resilient**, having survived past natural climate cycles that involved much greater warming and higher C02 concentrations than exist today or are likely to exist in the coming centuries?”

#### Warming Key to stop an Ice age

Alex **Morales**, 1-13-**2016**, "The Good News on Global Warming: We've Delayed the Next Ice Age," Bloomberg, http://www.bloomberg.com/news/articles/2016-01-13/the-good-news-on-global-warming-we-ve-delayed-the-next-ice-age

Global warming caused by fossil fuel emissions is blamed by scientists for intensifying storms, raising sea levels and prolonging droughts. Now there’s growing evidence of a positive effect: we may have delayed the next ice age by 100,000 years or more. QUICKTAKE Climate Change The conditions necessary for the onset of a new ice age were narrowly missed at the beginning of the Industrial Revolution in the 1800s, researchers at the Potsdam Institute for Climate Impact Research near Berlin wrote Wednesday in the journal Nature. Since then, rising emissions of heat-trapping CO2 from burning oil, coal and gas have made the spread of the world’s ice sheets even less likely, they said. “This study further confirms what we’ve suspected for some time, that the carbon dioxide humans have added to the atmosphere will alter the climate of the planet for tens to hundreds of thousands of years, and has canceled the next ice age,” said Andrew Watson, a professor of Earth sciences at the University of Exeter in southwest England who wasn’t involved in the research. "Humans now effectively control the climate of the planet." The study reveals new findings on the relationship between insolation, a measure of the Sun’s energy reaching the planet, levels of carbon dioxide in the atmosphere, and the spread of ice sheets that characterize an ice age. The researchers in Germany were able to use computer models to replicate the last eight glacial cycles and provide predictions on when the next might occur. The scientists found that even without further output of heat-trapping gases, the next ice age probably wouldn’t set in for another 50,000 years. That would make the current so-called inter-glacial period “unusually long,” according to the lead author, Andrey Ganopolski. “However, our study also shows that relatively moderate additional anthropogenic CO2-emissions from burning oil, coal and gas are already **sufficient to postpone the next ice age** for another 50,000 years,” which would mean the next one probably won’t start for 100,000 years, he said. “The bottom line is that we are basically skipping a whole glacial cycle, which is unprecedented.

#### Extinction

David **Deming 2009** (geophysicist and associate professor of Arts and Sciences at the University of Oklahoma) The Coming Ice Age, 5/13/09, http://www.americanthinker.com/2009/05/the\_coming\_ice\_age.html

In northern Europe, the Little Ice Age kicked off with the Great Famine of 1315. Crops failed due to cold temperatures and incessant rain. Desperate and starving, parents ate their children, and people dug up corpses from graves for food. In jails, inmates instantly set upon new prisoners and ate them alive. The Great Famine was followed by the Black Death, the greatest disaster ever to hit the human race. One-third of the human race died; terror and anarchy prevailed. Human civilization as we know it is only possible in a warm interglacial climate. Short of a catastrophic asteroid impact**, the greatest threat to the human race is the onset of another ice age**. The oscillation between ice ages and interglacial periods is the dominant feature of Earth's climate for the last million years. But the computer models that predict significant global warming from carbon dioxide cannot reproduce these temperature changes. This failure to reproduce the most significant aspect of terrestrial climate reveals an incomplete understanding of the climate system, if not a nearly complete ignorance. Global warming predictions by meteorologists are based on speculative, untested, and poorly constrained computer models. But our knowledge of ice ages is based on a wide variety of reliable data, including cores from the Greenland and Antarctic ice sheets. In this case, it would be perspicacious to listen to the geologists, not the meteorologists. By reducing our production of carbon dioxide, we risk hastening the advent of the next ice age. Even more foolhardy and dangerous is the Obama administration's announcement that they may try to cool the planet through geoengineering. Such a move in the middle of a cooling trend could provoke the irreversible onset of an ice age. **It is not hyperbole to state that such a climatic change would mean the end of human civilization as we know it.** Earth's climate is controlled by the Sun. In comparison, every other factor is trivial. The coldest part of the Little Ice Age during the latter half of the seventeenth century was marked by the nearly complete absence of sunspots. And the Sun now appears to be entering a new period of quiescence. August of 2008 was the first month since the year 1913 that no sunspots were observed. As I write, the sun remains quiet. We are in a cooling trend. The areal extent of global sea ice is above the twenty-year mean. We have heard much of the dangers of global warming due to carbon dioxide. But the potential danger of any potential anthropogenic warming is trivial compared to the risk of entering a new ice age. Public policy decisions should be based on a realistic appraisal

#### Covid strengthening Quebec nationalism - we’re on the brink now

Girard 20. Louis Girard, 7-31-2020, "Quebec Solidaire joins with the hard-right in promoting economic nationalism", International Committee of the Fourth International, https://www.wsws.org/en/articles/2020/07/31/qsca-j31.html //SW

The World Socialist Web Site recently exposed how Quebec Solidaire (QS)—a pseudo-left party that holds ten seats in the 125-member Quebec National Assembly—has supported Canadian authorities’ disastrous handling of the COVID-19 pandemic, and facilitated their efforts to compel a premature return to work that puts corporate profits before human lives. (See: Quebec Solidaire backs Canadian elite’s disastrous handling of COVID-19 pandemic)  The coronavirus crisis has also provided QS with an opportunity to join forces with the province’s right-wing populist, “Quebec First” CAQ (Coalition Avenir Québec) government in promoting a reactionary economic nationalist agenda.  Quebec Solidaire enthusiastically applauded the CAQ government's “Blue basket” initiative, a website promoting “Quebec made” products. The “Blue basket” is based on the principle, spelled out by Quebec Premier Francois Legault, that “we should be self-sufficient for goods that are essential.” QS, for its part, calls on the CAQ government “to set an example by investing in our local businesses,” and advocates that it “replace 40 percent” of the purchases Quebec departments and agencies make from out-of-province firms “with local purchases within four years.”  Quebec Solidaire has also responded positively to the CAQ’s proposal that Quebec become self-sufficient in medical equipment. QS advocates Quebec take “control of our medical supply” and create a new Quebec government agency, Pharma-Québec. This it claims would allow for a coronavirus vaccine to “be produced here in Quebec as soon as it is ready, with the sole objective of making it quickly accessible to the Quebec population.”  At a time when the COVID-19 pandemic is threatening millions of lives around the world, demonstrating the need for a science-based, internationally-coordinated response, Quebec Solidaire is trumpeting its nationalist egoism and parochialism.  Its reactionary utopia of “buying locally” and “developing a Quebec vaccine” exclusively for Quebeckers is part of pronounced shift by ruling elites in Canada, the United States and the world over towards national protectionism, intensified strategic competition, and virulent chauvinism.  This includes all sections of the political establishment—from Trump and the ultra-right to pseudo-left parties such as Quebec Solidaire and the German Left Party, as well as the traditional parties of government, liberal, conservative, and social-democratic.  These forces are exploiting the health and socio-economic catastrophe triggered by the COVID-19 pandemic to promote protectionism, including local production of “strategic resources,” and the strengthening of the state—based on the spurious claim that dependence on the import of N95 masks and other medical supplies has been a major factor in the pandemic’s deadly impact.

#### Economic causes Quebec secession – causes great power war AND global secessionism.

Daniel **Matthews 14**. Naval Gunfire Liaison Officer for III MEF. 2014. “THE QUEBEC WARS”<http://cimsec.org/quebec-wars/11757> http://cimsec.org/quebec-wars/11757

Thought of Canada being the region where the **sparks for World War III will be struck** may not seem likely, but there is one area where a foreign **foe could surprise the West: Quebec**. If Quebec were to secede from Canada, two unsettling possibilities could occur. The first is that **Canada could go to war with its wayward province**. The second is that **some power like China or Russia could build an alliance with Quebec**. While such possibilities are unlikely, there are means of defense. The Canadian Civil War If Quebec were to secede from Canada, there are several points that could **spark a civil war between the two**. The least likely would be national pride. There are several **economic reasons that could provide the tinder for war.** Quebec controls the mouth of the St. Lawrence River, and Quebec could use that control to wage economic war with Western Canada. In addition, Quebec possesses significant reserves of natural resources that currently contribute to the North American economy on a free basis. An independent Quebec would change that. Finally, Canada proper would become a split country, with a third of Canadian provinces being geographically separated from the Capital. In light of the fact that no state wants to be divided, and Canada already has several fluttering independence movements, the urge to prevent further dissolution will be strong. While it is true that Canada does not have a large military, and Quebec has none, it is not impossible for war to break out. The Quebec separatists have used violence before, most notably with the murder of Quebec Labour Minister Pierre Laporte, and it would be easy for a semi-independent Quebec to buy arms on the international market. If Canada did get involved in civil war with Quebec, there are several options open to both sides if the war drags on. Canada could invoke Article 5 of the NATO treaty, which could split NATO as France has traditionally expressed support for Francophone Quebec. It is unlikely Britain would be unconcerned with a core Commonwealth state being embroiled in civil war; especially depending on how the vote for Scottish independence goes this year. The United States would be committed, as they are deeply intertwined with Canada at every level. States like Russia, China, or Iran could use the **distraction** of a civil war in the very center of the Anglosphere to **press their boundaries with the Western Alliance**. Furthermore, they could start supporting the Quebec rebels, either directly or through third party means. If the war was presaged by an internationally recognized referendum, then Russia or China could take the position that they are upholding international norms, and paint the Western states in a negative light. Attempts at arming the rebels or openly supporting them would directly **threaten the fundamental security of the United States,** as it would **provide a foothold on the continent from which hostile states could threaten the United States**. The Bear and the Dragon in Quebec While the first scenario of a successful Quebec independence movement immediately descending into world war is unlikely, the far more dangerous one of an independent Quebec making allies with states hostile to the West is possible. An independent Quebec would have the full ability to make alliances with foreign powers, and it is unlikely they would be readily welcomed into NATO, NAFTA, or other treaties with the Western powers. Canada would put pressure on any attempts to allow Quebec a seat at the table, and European countries would be wary of admitting Quebec, **as it could fuel separatist movements within their own countries.**   In addition, the United States would not want the possibility of Canada dissolving, even if most of the providences would likely join the United States. This method of amalgamation would be undesirable, if for no other reason than there is no guarantee that each section of Canada would join the US, and a unified Canada is better for the US than a series of states on its northern border. The dissolution of Canada could also embolden separatist movements in the United States.   Given the internal danger to Western countries an independent Quebec would present, it is likely that Quebec would be forced to look for friends elsewhere. Russia and China are the most likely candidates. Both countries would be interested in the natural resources of Quebec. China and Russia would also both enjoy the prospects of helping to develop Quebec’s Arctic resources. In addition, the possibility of a military alliance with Quebec would present an opportunity not present since Alaska became part of the United States**; a land connection to the United States.**   Right now the Anglosphere is protected by its island status, with no major hostile powers sharing a land border with any member. An independent Quebec would be courted by hostile powers to allow such a chance thought. Russia would view it as retaliation for NATO expanding into the Baltics, Poland, and developing close relations with Ukraine and Georgia. China would view it as a chance to have a mirror for the US alliances in China’s First Island Chain, with the added bonus of a large land connection to the American heartland, as opposed to the slender one that the US has against China on the Korean peninsula. The presence of a near-peer competitor with **bases on** the **North America**n heartland would greatly reduce the flexibility of Western countries as they exert their influence on the world. Such a situation would be more bothersome to the United States and its allies than the Zimmerman telegram of a century ago, or the presence of Soviet missiles in Cuba half a century ago. It would have the same effect as **Germany’s race to rival Britain** on the high seas **before World War I**.

#### Climate change solves - it makes Canada a global superpower.

**Dembicki 17** [Geoff, VICE journalist, “How Climate Change Could Turn Canada into a Global Superpower,” accessible online at<https://www.vice.com/en_ca/article/mbanm4/how-climate-change-could-turn-canada-into-a-global-superpower>, published 07/24/17] // BBM

Climate change is going to suck for every country on the planet. But it may suck slightly **less** for Canada. If humanity can't reduce its greenhouse gas emissions to effectively **zero** by the end of this century, the doomsday impacts are difficult to fathom. The mass extinctions, crushing heat waves, exotic diseases, clouds of death smog and poisoned oceans described in a viral New York Magazine story by David Wallace-Wells would make our natural world unrecognizable. Yet climate change may also significantly affect the geopolitical world. By 2100, it's conceivable that the US economy will nosedive, dozens of developing countries will collapse and a new global superpower will arise to fill the **power vacuum**: **Canada**. No, seriously. Canada's economic dominance could be built on its gigantic supplies of **freshwater**, an ice-free Arctic Ocean that revolutionizes **international trade** and a mild-to-moderate climate that will be the **envy** of scorched and unlivable countries in more southern latitudes. But here's the thing: life won't be all that pleasant for many Canadians. We will be under constant threat of flooding, wildfires, tornadoes, heat waves, infestations and other disasters. National economic gains will mask stark and growing inequalities. Waves of immigrants and refugees will make us intolerant of outsiders. Amidst the chaos we will turn to authoritarian strongmen like Donald Trump to lead us. Yet compared to the rest of the world, Canada could look like a **progressive utopia**. To help us understand how this scenario may come to pass, VICE reached out to experts who study the future from the biggest of perspectives. They stressed the scenario above is one of many that could occur in a century of abrupt and nonlinear change. But the longer we delay on climate action, the **likelier** it becomes. One of those experts is Stanford University's Marshall Burke, who is among the world's top researchers on climate and economic productivity. He also studies the impact of global warming on armed conflict. Burke and several of his colleagues published a paper in the prestigious scientific journal Nature postulating that if climate change continues unabated there could be a 23 percent decline in average global income by 2100—compared to a world where global warming doesn't exist. Canada's average national income, meanwhile, could increase by **247 percent**. Burke's team produced these astounding figures by studying the past. "We're using history as a laboratory," he said. They looked at the impact of temperature changes on 50 years of economic activity in 166 countries. They examined whether the GDP in places as diverse as the US, Brazil, and Cameroon went up or down in years with unusually warm or cold weather. They found that economies tend to perform best in areas with average annual temperatures of 13 degrees Celsius—which, as it turns out, pretty much exactly describes a place like Silicon Valley. "Coincidence or not these also tend to be some of the wealthiest locations in the world," Burke said. His team then extrapolated those findings into the future. They imagined a world where climate change proceeds unabated until the year 2100. Already-hot countries suffer drastic impacts. Moderately warm ones decline. And cold nations like Canada see potentially large **economic gains** as their average annual climates approach the 13 degrees "**sweet spot**." These shifts won't be immediately visible to most people. "In any given year it's going to be hard to detect the specific contribution of climate to economic performance," Burke noted. "But what you're likely to see is sort of a death by thousand cuts." No country—rich or poor—will be immune from them. The most obvious way climate change affects an economy is through **agriculture**. Drought, storms, heat waves and invasive pests make it harder to grow food. Yet in an advanced economy such as the US, climate change could hamper growth in less apparent ways. Sweltering temperatures cause death and hospitalization, resulting in a **financial drag** on the healthcare system. Natural disasters hurt the insurance industry. People are **less effective** at their jobs in extreme heat. Factories produce fewer goods. The aggregate impact, according to Burke's research, could be a 36 percent decline in US income by 2100. The South will be hit particularly hard. And these are the impacts we could expect in one of the world's richest and most powerful countries. Places that are already struggling economically are going to be absolutely pummeled. Dehydration and chronic kidney disease could ravage Latin America's farm workers. Drought may set off civil wars in Africa. Entire cities and regions of the Middle East might become too physically hot to survive in. National income declines of 80 to 90 percent would become common across the developing world—that is, compared to growth scenarios without climate change. And this isn't even accounting for the one-off disasters—say, for instance, a surge of superstorms that destroy New York and London—which could send the global economy into a tailspin. "Our estimates can be considered a bit conservative," Burke said. Canadians will be watching the world burn with a mixture of **relief** and anxiety. In no way are we going to be immune from the physical effects of climate change. Polar bears and seals will go extinct across the North. Towns built on melting permafrost might literally collapse. Wildfires will rage out of control. Natural disasters caused by climate change could cost Canada up to $43 billion per year by mid-century, TD Economics estimated in 2014. Yet each dollar spent right now on adaptation could prevent up to $38 in future damages. And northern countries like Canada could see **economic benefits** from warmer temperatures. "Canada is going to have multiple **geographic advantages**," Burke said. "The evidence would suggest that Canada is likely to do well relative to many of its trading partners and competitors." One way that could happen is if melting ice opens up **shipping routes** in the Arctic Ocean. This would significantly **reduce** the **time** and **cost** of international trade. It could **revolutionize** the industry, the same way that container shipping did over the past 60 years, explained Rob Huebert, a University of Calgary associate professor who's studied the impact of climate change on the Arctic. "The ice will be gone and all of a sudden this becomes a passage and it becomes a passage through a country that will be considerably more stable than what you see in, say, Egypt," he said. Climate change could at the same time bring **more fish** into the Arctic Ocean, and into the northern reaches of the Pacific and Atlantic. During these same decades global trade is expected to **triple**, while the economic value of the planet's oceans doubles to **$3 trillion**. By taking advantage of these trends Canada could become a "**global superpower**," as Ocean Networks Canada leader Kate Moran has argued. That's an assessment shared by UCLA scientist Lawrence Smith, who's speculated that the small Manitoba city of Churchill could be one of 10 "**ports of the future**." "In many ways, the New North is **well positioned** for the coming century," he wrote. And Stony Brook professor Noah Smith has urged Americans to, "keep an eye on the big country to the north—it could be headed for very important, very good things."

#### Companies will just obtain a patent in a different sector.

Thomas 15 [John R; Visiting Scholar, CRS; “Tailoring the Patent System for Specific Industries, Congressional Research Service,” CRS; 2015; <https://crsreports.congress.gov/product/pdf/R/R43264/7>] Justin

In view of the concerns noted above, commentators have gone so far to say that “it has become increasingly difficult to believe that a one-size-fits-all approach to patent law can survive.”75 To the extent the current patent system creates a blanket set of rules that apply comparably to distinct industries, it likely over-encourages innovation in some contexts and under-incentivizes it in others.76 Further, some observers have asserted that the need of firms to identify and access the patented inventions of others may differ among industries.77 As a result, the case can be made that distinct industrial, technological, and market characteristics that exist across the breadth of the U.S. economy compel industry-specific patent statutes. However, others have questioned the wisdom and practicality of such line-drawing.78 The following concerns, among others, have been identified:

• Over its long history, the U.S. patent system has flexibly adapted to new technologies such as biotechnology and computer software. Legislative adoption of technology-specific categories may leave unanticipated, cutting-edge technologies outside the patent system.79

• Defining a specific industry or category of technologies may prove to be a contested proposition.

80 • Over time, new industries may emerge and old industries may consolidate. The dynamic nature of the U.S. economy suggests greater need for legislative oversight within a differentiated patent regime.

81 • Even if an industry or technology remains relatively stable, the innovation environment within it might change. For example, technological or scientific advances might open new possibilities for research and development within hidebound industries—but also increase expense and risk for those firms.

82 • Distinct patent rights among industries or technologies may lead to strategic behavior on behalf of patent applicants. For example, a computer program that controls a fuel injector within an automobile could possibly be identified as either an automobile-related or a computer-related invention.

83 •The legislative effort to enact sector-specific patent laws may provide an opportunity for politically savvy firms to exert more lobbying and political power, at the possible expense of less sophisticated firms.

#### Aff gets circumvented- powerful countries use bilateral agreements to force other countries to accept their IPR protections- its empirically proven