# Nc v rob

## 1

#### Interp: The affirmative must only defend the hypothetical enactment of the resolution “Resolved: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines”

#### Resolved means a policy. Find Law Legal Dictionary

**Find Law Legal Dictionary** <https://dictionary.findlaw.com/definition/resolve.html> //SR

2 : a legal or official determination

#### WTO:

**WTO n/d,** <https://www.wto.org/english/thewto_e/whatis_e/whatis_e.htm> //SR  
The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world’s trading nations and ratified in their parliaments. The goal is to help producers of goods and services, exporters, and importers conduct their business.

#### Violation:

#### Vote negative for limits---the resolution is the most predictable stasis point for debates, anything outside of that ruins prep and clash by allowing the affirmative to pick any grounds for debate. That greenlights a race away from the core topic controversies that allow for robust contestation, which favors the aff by making neg ground inapplicable, susceptible to the perm, or concessionary.

#### The impact is iterative content mastery---getting to the third and fourth level of tactical engagement is only possible with refined and well-researched positions connected to the resolutional mechanism. Repeated debates over core issues incentivize innovative argument production and improved advocacy based on feedback and nuanced responses from opponents.

#### Independently, fairness outweighs because the aff presumes its evaluated fairly, controls our ability to test the truth value of the aff which also means they don’t get to weigh case, and the win is what motivates people to listen - if you don’t understand how they create change by the end of this round but you do understand why iterative testing and fair clash is good for debate - vote negative.

#### TVA solves - read your aff under a whole res plan text - still get discussions of cybernetics and SSD solves - read cybernetics on neg or out of round which solves

## 2

#### The narrativization of politics is inherently conservative—it is the embrace of capitalist excess and destroys any attempt to resist or oppose capitalism on any grounds

Foster 97(John Bellamy, Dept of Sociology at Oregon, 1997, “In Defense of History”, In Defense of History, ed. Foster & Wood)

The weaknesses of postmodernism-from an emancipatory perspective- thus far overshadow its strengths. Missing from Foucault's analysis, like that of postmodernism generally, is any conception of a counter-order to the disciplinary orders described. In the more extreme case of "textual postmodernists"-those postmodernist thinkers like Derrida, as distinct from Foucault, who deny any reality outside the text-the political and historical weaknesses from a left perspective are even more glaring. By undermining the very concept of history-in any meaningful sense beyond mere story-telling-such theorists have robbed critical analysis of what has always been its most indispensable tool.'8 The denial within postmodernist theory of the validity of historical cri- tique covers up what is really at issue: the denial of the historical critique of capitalism, leading to a convergence between left thought infected by Nietzsche and the dominant liberal "end of history" conception. The danger of such ahistorical or anti-historical views, as E.P. Thompson observed, is that one loses sight not of "reason in history" in some abstract sense, but rather of "the reasons of power and the reasons of money."9 Historical materialism at its best provides a way out of this dilemma. This is not to ignore the fact that Marxism-which has sometimes given rise to its own crude interpretations and historical travesties, as in the case of Stalinism-has frequently been identified with the kind of "totalizations" and "essentialisms" that postmodernist theorists have singled out. As Thompson pointed out in a 1977 essay on Christopher Caudwell, Marxism has sometimes relied on " `essentialist' tricks of mind," the "tendency to intellectualize the social process"-"the rapid delineation of the deep proc- ess of a whole epoch." These are things that the historian (and social scientists in general) should guard against. But to abandon theory and historical explanation entirely in order to avoid "essentialism" and "foun- dationalism" is a bit like throwing out the baby in order to keep the bathwater clean. Marx himself provided another model, actively opposing theory (even "Marxist" theory) that purported to be "suprahistorical." In his Theses on Feuerbach, he presented what still ranks as the most thorough- going critique of what he called the "essentialist" conception of human beings and nature. Indeed, historical materialism has long engaged in its own self-critique, precisely in order to expel the kinds of "essentialisms," "positivisms," and "structuralisms" that have intruded on the philosophy of praxis itself-a self-critique that has produced the insights of theorists like Gramsci, Sartre, Thompson, and Raymond Williams.20 These thinkers distanced themselves from the positivistic "official Marx- ism" that grew out of the Second International and later turned into a caricature of itself in the form of Stalinism. Yet they held firm to the critique of capitalism and their commitment to the struggles of the oppressed. Moreover, these particular examples tell us that if what has sometimes been called "the postmodern agenda"-consisting of issues like identity, culture, and language-is to be addressed at all, this can only be accomplished within a historical context. And here one might openly wonder with Foucault "what difference there could ultimately be between being a historian and being a Marxist." When placed within a more holistic historical materialist context-ani- mated by the concept of praxis-the problems raised by postmodernism look entirely different. As David McNally says, "Language is not a prison- house, but a site of struggle." What the contributions in this volume have in common is the insistence that issues like language, culture, nationality, race, gender, the environment, revolution, and history itself are only effec- tively analyzed within a context that is simultaneously historical in charac- ter, materialist (in the sense of focusing on concrete practices), and revolutionary. Such analyses do not abandon the hope of transcending capitalism, nor of the notion of human progress as a possible outcome of historical strug- gles. It is said that Nicholas I, Czar of Russia, issued an order banning the word "progress." Today we no longer believe, in a nineteenth century sense, in automatic human progress, embodying some definite content-the idea that the Czar found so threatening. But this does not mean, as the philoso- pher Michael Oakeshott contended with respect to political activity in the 1950s, that we "sail a boundless and bottomless sea" that has "neither starting-point nor appointed direction" and that our only task is "to keep afloat on an even keel." History-as centuries of struggle and indeed pro- gress suggest-is more meaningful than that. To abandon altogether the concept of progress, in the more general sense of the possibility of progres- sive human emancipation, would only be to submit to the wishes of the powers that be. Such political disengagement by intellectuals on the left in the present epoch could only mean one thing: the total obeisance to capi- tal.21 The irony of post-modernism is that while purporting to have transcended modernity, it abandons from the start all hope of transcending capitalism itself and entering a post-capitalist era. Postmodernist theory is therefore easily absorbed within the dominant cultural frame and has even given rise recently to texts such as Postmodern Marketing, which attempts to utilize the insights of thinkers like Foucault, Derrida, Lyotard, and Baudillard to market goods within a capitalist economy. Perhaps this will be the final destiny of postmodernist theory-its absorption by the vast marketing apparatus of the capitalist economy, adding irony and color to a commercial order that must constantly find new ways to insinuate itself into the every- day lives of the population. Meanwhile, historical materialism will remain the necessary intellectual ground for all those who seek, not to revel in the "carnival" of capitalist productive and market relations, but to transcend them.22

#### The underlying structures of capitalism remain in a world of information technology – changing our analysis forcloses a Marxist movement

Keating 99 Craig Keating – Professor of History at Langara College, reviewing James Laxer – political economist, professor and author at York University “The undeclared war: class conflict in the age of cyber capitalism” Fall 1999 (http://proxy.lib.umich.edu/login?url=http://search.proquest.com.proxy.lib.umich.edu/docview/218786449?accountid=14667)

As the "cyber" in cyber capitalism suggests, however, for Laxer, as opposed to Jameson and Harvey, a fundamental aspect of this new capitalism is computer technology. Advances in computer technology, he argues, are central to the increased mobility of capital today. Computers allow investors "distant from productive enterprises, [to] move in and out of participation in their financing in a matter of minutes or hours," (107) a facility of capital movement which gives rise to a "money-economy" destructive of the "real economy" of the production of goods and services. This notion of an essential and constitutive link between contemporary capitalism and computer technology pervades this work and fuels much of Laxer's rhetorical excess. Joseph Lewis, a British financier who has made a substantial fortune playing "techno-financial games," (108) is described as "personif[ying] the new techno-wizard billionaire." (109) Bill Gates, who lives in a "techno-retreat" on Lake Washington, (86) is described as a "demigod, not merely because of his wealth but because he is the sorcerer, the master of symbols. He produces the very technology that has helped liberate the flow of money in our time. He is the alchemist who fuses the new technology with money." (95) The force of these arguments about the destructive effects of technology rely upon the power that largely romantic literary themes exercise over the Western imagination rather than on critical reflection. For it is the telephone (a technology that Laxer does not seem to fear) and the current international regulations governing the flow of capital, not the computer, that permit the kind of by-the-minute investing characteristic of contemporary capitalism. Moreover, to the extent that Marx pointed out that the chief defining characteristic of industrial capitalism was continual technological revolution giving rise to continual social and economic revolution; and to the extent that he also argued that capitalism "must nestle everywhere, settle everywhere, establish connections everywhere" it seems to me that we exist today in that self-same system of capitalism that Marx defined, one that is not at all superseded by computers or globalization nor one which might merit speaking of a new and different "cyber" capitalism. Computer technology is merely another technological innovation of industrial capitalism, no more constitutive of it than, say, the automobile. To suggest otherwise is to abandon Marxism for science fiction. But the abandonment of Marxist theory, which Laxer seems to invoke when he claims to want to "analyze global capitalism as a system and to draw conclusions about who has power within it and who does not," (4) is one of the defining characteristics of this book. Not only do we have the problematic conceptions of social class and "cyber capitalism" outlined above, but one can also see the influence of George Grant's Technology and Empire when Laxer argues that American superpower has allowed "American ideas and values" (in what way these ideas are essentially American and not indicative of capitalism tout court is not explained) to become hegemonic and have foreclosed options that Canada might pursue in resolving social and economic problems presented by contemporary capitalism. (240) This theoretical heterodoxy gives rise to the question of why Laxer makes issues of theoretical orthodoxy, and especially the denunciation of postmodernism, so important to this book.

#### Capitalism’s successes necessitate human extinction and destroy the value to life – it’s try or die for alternative organizing

Duzgun 20 [Eren Duzgun (teaches Historical Sociology and International Relations at Leiden University, Netherlands), 4-5-2020, "Capitalism, Coronavirus and the Road to Extinction," Socialist Project, https://socialistproject.ca/2020/04/capitalism-coronavirus-and-road-to-extinction/]

**Covid-19, by contrast, has begun its journey and taken its biggest toll thus far in the most advanced and affluent parts of the world**. This is to say, the contagion is no longer limited to the persistently undernourished, underdeveloped, and war-torn parts of the world; its impact is no longer restricted to a distant wet market or a third world country alone. **Instead, it has emerged and expanded in the very heart of the capitalist world order at a time when capitalism has not only been already firmly established across the globe but has been testing the eco-biological limits of the entire planet. Should things remain the same, Covid-19 and its future cousins are likely to claim the lives of not just ‘some’ people as they did in the past, but of humanity as a whole. In this sense, perhaps for the first time in modern history, the biological blitzkrieg activated by the coronavirus has thrown into sharp relief the immediately existential and undeniably global contradictions and consequences generated by capitalism.** Contradictions on a Global Scale Critical biologists and epidemiologists have put the blame on industrial agriculture as the root cause of the emergence of new pathogens since the 1990s. [According to Rob Wallace](https://climateandcapitalism.com/2020/03/11/capitalist-agriculture-and-covid-19-a-deadly-combination/), giant agribusiness and resource extraction firms have now reached the last virgin forests and smallholder-held farmlands in the world, subordinating them to the logic of capitalist markets. **The loss of the ecological diversity and complexity of these huge tracts of land has increasingly forced wild food operators to hunt in previously untouched parts of the jungle, which, in turn, has increased “the interaction with, and spillover of, previously boxed-in pathogens, including Covid-19.”** Likewise, global warming has forced or allowed pathogens to escape their natural habitat. As a result, new viruses against which we have no immunity “are being sprung free, threatening the whole world.” In short, [as John Vidal writes](https://www.theguardian.com/environment/2020/mar/18/tip-of-the-iceberg-is-our-destruction-of-nature-responsible-for-covid-19-aoe), “we disrupt ecosystems, and we shake viruses loose from their natural hosts. When that happens, they need a new host. Often, we are it.” **That some agribusiness firms have been blatantly risking lives for profit would not come as a surprise to the critical reader**. Even [Bill Gates has been sounding the alarm](https://www.youtube.com/watch?v=6Af6b_wyiwI) about the potentially deadly consequences of irresponsible business practices and new viruses. **Yet, what tends to remain underemphasized in these debates is that the blame belongs neither solely to ‘greedy’ firms that have driven viruses out of their natural habitat, nor to ‘short-sighted’ politicians who have not invested enough in vaccine technology or national health systems. Instead, the problem is rooted in the very structure and rationality of the system as a whole. That is, we may go extinct as a result of the ‘successes’ of the very system ‘we’ created in the first place, i.e., capitalism. How did we end up losing control of an ‘economic’ system of our own making?** This is indeed an anomaly in human history. The conception of the ‘economy’ as an autonomous sphere dictating its own rules over society did not exist in non-capitalist societies. As the economic anthropologist [Karl Polanyi](https://en.wikipedia.org/wiki/Karl_Polanyi#Works) put it, “neither under tribal, nor feudal, nor mercantile conditions was there… a separate economic system in society.” The economy either “remained nameless” or had “no obvious meaning,” for the economic process and prices were instituted through non-market means, such as kinship, marriage, age-groups, status, political patronage, etc. Even “where markets were most highly developed, as under the mercantile system,” the economic system, as a rule, “[was absorbed in the social system](https://books.google.ca/books?id=SgHuxQEACAAJ)” and showed “no tendency to expand at the expense of the rest.” In this sense, the market with a distinctive logic, autonomy, and dynamic of its own was completely unknown to our ancestors, and indeed, the emergence of the idea of ‘self-regulating’ markets represented a complete reversal of the way in which past economies functioned. **In order for ‘self-regulating’ markets to ‘self-regulate’, a variety of political and institutional arrangements had to be initiated to progressively eliminate the non-market survival strategies that humans previously relied upon.** Most notably, the age-old communal systems of social and moral regulation needed to be eradicated, a process that systematically subordinated the ‘natural and human substance of society’, i.e., land and labour, to market relations for the first time in history. Rise of Capitalism **At the heart of the rise of capitalism, therefore, rested a ‘political’, legal, and violent process that led to the historically unprecedented characterization of land and labour as commodities. Without commodifying land and labour, i.e., without treating the planet’s living substance as commodities, it would have been impossible to view the ‘economy’ as an institutionally and motivationally self-regulating sphere of life, an almost robotic creature functioning at the expense of human lives and livelihoods. Capitalism presupposed from the very beginning a radical transformation in the human use of nature as well as in the provision of life’s essential requirements. In this sense, the danger of global extinction which we have been going through is not a temporary hiccup in an otherwise smoothly operating capitalist ecosystem but has always been a possibility built into the very structure of market society.** On the one hand, by treating land and labour as commodities, by subjecting people’s utilization of land and enjoyment of life to their ability to continuously increase market competitiveness and productivity, capitalism has enabled massive technological advancements in all spheres of life. This, in turn, has generated, above all, an unprecedented potential to feed, clothe, and accommodate an ever-increasing world population. **On the other hand, however,** [**as Ellen Wood argues**](https://monthlyreview.org/1998/07/01/the-agrarian-origins-of-capitalism/)**, by subordinating all other considerations to the imperatives of market competition, capitalism has also created poverty, homelessness, environmental destruction and pandemics**. Billions of people who could be fed and housed are subjected to immense doses of insecurity, living their lives under the constant threat of joblessness, homelessness, loss of status and starvation. **In a similar fashion, the environment that could be protected is systematically destroyed for profit, and killer viruses that could be contained are unleashed.** Undoubtedly, Covid-19 has become the archetypal example that lays bare “the destructive impulses of a system in which the very fundamentals of existence are subjected to the requirements of profit.” **Can the ‘positive’ and ‘negative’ outcomes of capitalism be somewhat reconciled? Indeed, for a brief period in the Global North, it seemed they could be**. During the so-called [Golden Age of Capitalism](https://global.oup.com/academic/product/the-golden-age-of-capitalism-9780198287414) (1945-70), massive productivity increases (alongside working-class struggles) allowed for steady increases in wages, job security, expansion of welfare state, improvements in the living conditions of the majority of the labouring masses as well as the expansion of civil and political liberties. **Yet, this brief period of generalized prosperity and stability also facilitated the incorporation of the western working classes into the dominant capitalist ideology, causing them to turn a blind eye to the economically destabilizing, environmentally destructive, and socially degrading impact of global capitalism in the Global South.** The main ‘problem’ with the Global South has been, by and large, a question of ‘timing’. **Once capitalism was established and consolidated in the Global North, it has not only led to the birth of new and more effective forms of imperialist control and neocolonial expansion but has also irrevocably undermined the potentially positive outcomes of capitalist development elsewhere.** For example, the [MIT political economist Alice Amsden](https://global.oup.com/academic/product/the-rise-of-the-rest-9780195170597), a large chunk of whose work in the 1970s and 1980s sought to explain the success of the ‘Asian Tigers’, more recently concluded that the massive technological and infrastructural gap between the North and the South has literally made impossible capitalist ‘development’ of any sort in the vast majority of southern economies since the 1990s. The economic situation in the Global North has gotten progressively worse too. Under the conditions of increased global economic competition wages have been stagnating or declining since the 1970s, while decades of fiscal austerity wiping out most of the economic and social gains of the earlier period. The new reality of high unemployment, stagnant wages, long work hours and precarious jobs has been masked for a while by a debt-driven growth, the unsustainability of which has been bitterly testified by millions of people since the 2008 financial crisis. All in all, market imperatives have been regulating social reproduction almost worldwide for a long time but with no prospect of capitalist ‘development’ for an overwhelming majority of the world’s population in the South and the North alike. **Furthermore, the ecologically disastrous and socially inhumane consequences of capitalism have long outweighed the prospects of material gain in the Global South.** In this respect, what is being painfully realized in the current conjuncture is that the North is no longer able to externalize the worst consequences of such an unsustainable mode of life. The North isn’t and won’t be spared the existential threats posed by global capitalism. **The implication is that any meaningful attempt at solving the present, and future crises needs to take the bull by the horn**. There is literally no choice to be made between ‘capitalism’ and ‘capitalism with a human face’. **As long as the underlying dynamics of our lives remain the same, as long as we keep treating nature and human beings as commodities, no** [**cosmetic surgery**](https://foreignpolicy.com/2018/09/12/why-growth-cant-be-green/) **will do. To the contrary, historical experience suggests that such minimal interventions will sooner or later backfire, re-legitimizing capitalism pure and simple. The only way to ‘re-embed’ our economies and save our lives from ecological collapse is by intervening in the very heart of the beast: land and human beings need to be taken out of the market. The beast is not tameable; it needs to be**[**killed**](https://monthlyreview.org/product/what_every_environmentalist_needs_to_know_about_capitalism/)**.**

## Case

#### Tech thought is inevitable – at worst neg on presumption. Kateb 97

**Kateb**, professor of politics – Princeton, ’**97** (George,<http://findarticles.com/p/articles/mi_m2267/is_/ai_19952031>)

But the question arises as to where a genuine principle of limitation on technological endeavor would come from. It is scarcely conceivable that Western humanity--and by now most of humanity, because of their pleasures and interests and their own passions and desires and motives--would halt the technological project. Even if, by some change of heart, Western humanity could adopt an altered relation to reality and human beings, how could it be enforced and allowed to yield its effects? The technological project can be stopped only by some global catastrophe that it had helped to cause or was powerless to avoid. Heidegger's teasing invocation of the idea that a saving remedy grows with the worst danger is useless. In any case, no one would want the technological project halted, if the only way was a global catastrophe. Perhaps even the survivors would not want to block its reemergence. As for our generation and the indefinite future, many of us are prepared to say that there are many things we wish that modern science did not know or is likely to find out and many things we wish that modern technology did not know how to do. When referring in 1955 to the new sciences of life, Heidegger says We do not stop to consider that an attack with technological means is being prepared upon the life and nature of man compared with which the explosion of the hydrogen bomb means little. For precisely if the hydrogen bombs do not explode and human life on earth is preserved, an uncanny change in the world moves upon us (1966, p. 52). The implication is that it is less bad for the human status or stature and for the human relation to reality that there be nuclear destruction than that (what we today call) genetic engineering should go from success to success. To such lengths can a mind push itself when it marvels first at the passions, drives, and motives that are implicated in modern technology, and then marvels at the feats of technological prowess. The sense of wonder is entangled with a feeling of horror. We are past even the sublime, as conceptualized under the influence of Milton's imagination of Satan and Hell. It is plain that so much of the spirit of the West is invested in modern technology. We have referred to anger, alienation, resentment. But that cannot be the whole story. Other considerations we can mention include the following: a taste for virtuosity, skill for its own sake, an enlarged fascination with technique in itself, and, along with these, an aesthetic craving to make matter or nature beautiful or more beautiful; and then, too, sheer exhilaration, a questing, adventurous spirit that is reckless, heedless of danger, finding in obstacles opportunities for self-overcoming, for daring, for the very sort of daring that Heidegger praises so eloquently when in 1935 he discusses the Greek world in An Introduction to Metaphysics (1961, esp. pp. 123-39). All these considerations move away from anger, anxiety, resentment, and so on. The truth of the matter, I think, is that the project of modern technology, just like that of modern science, must attract a turbulence of response. The very passions and drives and motives that look almost villainous or hypermasculine simultaneously look like marks of the highest human aspiration, or, at the least, are not to be cut loose from the highest human aspiration.

#### Disasters Turn - Algorithmic data is key to natural disaster response - the alternative is global atrocities. Karlsrud 14

John **Karlsrud 14**, Senior Research Fellow and Manager of the Training for Peace programme at NUPI, Peacekeeping 4.0: Harnessing the Potential of Big Data, Social Media, and Cyber Technologies, in “Cyberspace and International Relations: Theory, Prospects and Challenges,” https://www.researchgate.net/profile/Hakan\_Mehmetcik/publication/285282612\_A\_New\_Way\_of\_Conducting\_War\_Cyberwar\_Is\_That\_Real/links/5c63f67d45851582c3e47db7/A-New-Way-of-Conducting-War-Cyberwar-Is-That-Real.pdf

Brought together, the data can enable international organizations to follow and possibly **prevent** evolving situations and crises. This potential has been recognized; and, following the financial crisis, the UN Secretary-General created UN Global Pulse to explore opportunities for using real-time data to gain a **more accurate understanding** of population wellbeing, especially related to the impacts of global crises. The availability of real-time data holds great promise for helping us detect the early signs of stress on vulnerable populations. It represents an unprecedented opportunity to track the human impacts of crises as they unfold, and to get real-time feedback on how well policy responses are working (UN Global Pulse 2012b). As such, research undertaken by UN Global Pulse, notably though its networks of country-level “Pulse Labs,” may give the UN a better ability to follow, respond to and mitigate the impact of **natural disasters** and **complex crises**. However, more than 90 % of the information will be unstructured, potentially rich in useful information. Turning structured and unstructured information into actionable data requires efficient ways of structuring and analyzing the information in real time in a data ecosystem (WEF 2010, p. 4). This process is often called “reality mining” (UN Global Pulse 2012a, p. 18; Eagle and Pentland 2006) or “data mining”—discovering patterns in large data sets (Cheshire 2011; Helbing and Balietti 2012). So, how can the UN and other multilateral actors make use of this data? Cooperation has been initiated with Google and other large corporations that are at the forefront in harvesting actionable data from the “data deluge” (The Economist 2010b). Concurrently with this development, the digital divide is closing at an increasing speed. According to the World Bank, 44.9 out of every 100 people in subSaharan Africa had a mobile subscription in 2010 (World Bank 2012a), and by 2016 this figure will reach 91.3 (Portio Research 2012), although the high number may mask persons have more than one subscription. The percentage of population with access to internet is also increasing (World Bank 2012b). This means that the amount of both structured and unstructured data that can be analyzed and can **inform multilateral efforts for conflict prevention** and international security is increasing rapidly and can give a more even and realistic picture of the situation in question. However, there is a need to be realistic. There is great variance in the access to data between countries such as Syria and the Democratic Republic of Congo, and many have more than one mobile subscription to strengthen their resilience against patchy networks. Other co-influencing factors are the rapid spread of 3G networks in developing countries and affordable smart phones at prices down to $50 or less (Jidenma 2011). There is also a current global mega-trend of access to the internet through mobile devices: “in a world where there are 6.3 bn mobile users and 2.3 bn internet users, the default access mode to broadband services is mobile” (Ulf Ewaldsson, Ericsson, quoted in ITU 2012a). According to the International Telecommunication Union, “the ubiquitous mobile phone provides an important foundation for the uptake of mobilebased Internet [in the developing world]. With the majority of countries worldwide having launched 3G mobile-broadband services, the prospects are promising” (ITU 2012b, p. 39, Evans 2012). In the areas of conflict prevention, humanitarian action, and development, the UN has made some initial steps. But what then is the situation in the areas of peacekeeping and peacebuilding? Unfortunately, little progress has been made so far. Notwithstanding the inclusion of surveillance drones in one peacekeeping mission, the development of Joint Mission Analysis Cells and Joint Operations Centres (which I will return to in the next section), the use of mobile phones in community alert networks in eastern Congo, and the heightened focus on the strategic planning and coordination capacity of peacekeeping and peacebuilding operations, much work remains before peacekeeping operations can be said to be tapping the potential of big data, social media, and cyber-technology effectively, entering the age of “Peacekeeping 4.0.” The good part of this story is that much work already has been undertaken in the similar and parallel fields of **conflict prevention**, **humanitarian action** and development. Many lessons from these fields could easily be imported, while other innovative approaches can be accessed through increased cooperation and coordination. Accomplishing this will require overcoming various bureaucratic hurdles and turfism, driven by support from engaged member states and the Secretary-General. Finally, the uptake of digital information in the planning of UN peace operations may also have implications for how the interaction between the UN, member states and civil society is theorized. IR theorists have increasingly underscored the importance of civil society actors as potential norm entrepreneurs (Keck and Sikkink 1998), and more recent research looking at the relationship between media and international organizations emphasize the potential role civil society and new technology can play in democratizing the access to information, but also the potential for groups spreading disinformation and incite hatred. This chapter will seek to explore what chances the availability of Big Data and new technologies offer for peacekeeping and as well as inherent challenges. The chapter proceeds as follows: First, I narrow in on some key initiatives in the areas of conflict prevention, humanitarian action, and development that can be relevant to peacekeeping. The following section provides a short background on peacekeeping and its evolution from the end of the Cold War until present, noting some of the steps taken to date. Thirdly, I discuss some of the challenges and opportunities facing policymakers, and relate these to the area of peacekeeping in particular. Finally, the chapter sums up and offers some recommendations for policymakers among member states, in the UN, and among civil society, as well as pointing out areas in need of further research, to enable the UN to enter the era of fourth generation peacekeeping—“Peacekeeping 4.0.” 2 Cyberization of Conflict Prevention, Humanitarian Action, and Development The age of Big Data and social media has dawned on the fields of humanitarian activity, social activism, and development. Here the application of big data and social media has advanced a great deal further than in the areas of peacekeeping and peacebuilding, particularly among civil society organizations (CSOs) and other independent actors. One of these initiatives is **Ushahidi**. Ushahidi is a “web based reporting system that utilizes crowdsourced data to formulate visual map information of a crisis on a real-time basis” (Ushahidi 2012a). Ushahidi, which means “testimony” in Swahili, was originally a website established after the election violence in Kenya in 2008 to map incidents of violence (Ushahidi 2012b). Using crowdsourcing as a method means that everyone with access to common digital communication channels can contribute data.1 The data can be provided via text messages, email, twitter and web-forms. One recent example is **Syria Tracker**—a website set up to monitor violent incidents involving civilians in Syria: “Syria Tracker is a crowdsourced effort developed by individuals concerned about the harm inflicted upon civilians in Syria” (Syria Tracker 2012). Ushahidi and Syria Tracker are part of a tendency of “how non-state actors are increasingly collaborating online to tackle issues traditionally managed by governments” (Leson 2012). Also in the area of monitoring and evaluation, internet platforms are being established to ease the sharing and coordination of information. One example is the ActivityInfo website established by UNICEF, OCHA, and bedatadriven; it “that helps humanitarian organizations to collect, manage, map and analyze indicators…and allow for real time monitoring of the humanitarian situation in the eastern part of the Democratic Republic of Congo” (ActivityInfo 2012). Analyzing the use of Google searches or Twitter messages can give strong indications of evolving situations, or whether an epidemic is spreading. Paul and Dredze (2011) found a very strong correlation coefficient (0.958) between tweets and official flu statistics, where the tweets were in real time and the statistics available only afterwards. Analyzing trending topics in Google searches or Facebook and blog posts can also yield significant data (Ginsberg et al. 2009). Google Dengue Trends uses aggregated Google search data to estimate dengue activity (Google 2012a); there is a similar service for influenza (Google 2012b). Following the earthquake in Port-au-Prince, Haiti, researchers from Sweden’s Karolinska Institutet and Columbia University in New York used mobile phone data, tracking 1.9 million SIM cards (Bengtsson et al. 2011, p. 2). They were able to follow the population flows and destinations of 648,717 people who had been displaced (ibid.:3). Later that year, the same team followed population movement after a cholera outbreak (Bengtsson et al. 2010, p. 2). Multilateral actors have started to catch on. The UN Secretary-General has created UN Global Pulse; the World Bank has begun discussing how big data can be used for development (World Bank 2012c), and has established “Mapping for Results” to visualize and track its programs and projects on the ground (World Bank 2012d). However, much remains to be done. In 2009, the UN Global Pulse Initiative launched the Rapid Impact and Vulnerability Analysis Fund (RIVAF). However, a recent report published by the initiative reveals a focus on the use of traditional indicators, and a lack of focus on conflict and post-conflict countries, even though many of the UN agencies, funds, and programs involved in the RIVAF initiative operate in precisely such locations (UN Global Pulse 2011). Further work is necessary in this area, also to focus the energies of developmentoriented organizations to conflict and post-conflict countries and utilize the potential offered by big data, social media, and cyber-technology. The UN has engaged with the Crisis Mappers community since 2010 (UN 2012a, p. 4, Crisis Mappers 2012); among other things, the Standby Task Force has supported OCHA crowdsourcing data for South Sudan, collecting “a total of 1,767 unique rows of data and 15,271 unique pieces of information records” in a mere 3 days (Standby Task Force 2012). At a recent meeting in New York to discuss the status of implementation of the UN’s Crisis Information Strategy, it was agreed that there is a need for Crisis Information Managers, and that the efforts towards convergence in crisis information management could support the “endeavours of ‘One UN’ and better coordination within the UN and the international community in general” (Swiss Mission to the United Nations 2012). A Crisis Management Training Course has since been established, with the first course being given in February 2013 at the International Peace Support Training Centre (IPSTC) in Nairobi, Kenya. The course will train civilians, military and police “working in multidimensional peace and humanitarian operations … to integrate new information technology into an information management system [and] demonstrate the opportunities and challenges of new ICTs [Information and Communication Technology] and social media tools…” (ICT4Peace 2012a). The challenge now will be to get the UN onboard and send staff to these courses, providing the organization with staff trained personnel that can enable it to make use of Big Data, ICTs and social media in its operations. The UN in Sudan has taken one step in this direction. With support of the United Kingdom, UNDP has run a Crisis Recovery and Mapping Analysis project since 2007 (UNDP 2012a), aimed at supporting both the UN country team (UNCT) and national authorities in making their activities more evidence-based and conflict-responsive (see also Bott and Young 2012).2 In Georgia, the Caucasus Research Resource Centers and Saferworld have joined forces with developers to produce Elva, combining “the data-rich mapping of Ushahidi with the meticulous requirements of human-rights researchers” (Sifry 2012). The platform is used to create a community safety network where a community representative, using SMS, can report violent or security incidents on a weekly basis. A similar initiative was developed by Columbia University in connection with the Voix des Kivus program in the Democratic Republic of Congo (DRC) to “overcome the problems associated with the collection of conflict data” (van der Wind and Humphreys 2012). It involved distributing prepaid cellphones, solar chargers, and code sheets to community representatives in 18 villages in Eastern Congo (ibid.). For both projects, protecting the identity of those reporting against possible reprisals became an important concern (ibid., p. 24; see also Puig 2012). Together with the crisis mapping community, OCHA is experimenting with developing **twitter dashboards for humanitarian crises**. These use “Machine Learning (ML) techniques and social computing methods… to extract relevant information from twitter and aggregate this information according to Cluster for analytical purposes” (Meier 2012). A similar dashboard for peacekeeping operations “that looks across social media content and perhaps uses corporate data” could be envisaged (Interview with Meier 2012).

#### No tech accidents, no algorithmic arms race. Shermer 17

Michael **Shermer 17**. Publisher of Skeptic magazine, a monthly columnist for Scientific American, and a Presidential Fellow at Chapman University. 04/2017. “Why Artificial Intelligence Is Not an Existential Threat.” Skeptic, vol. 22, no. 2, pp. 29–35.

Why AI is not an Existential Threat First, most AI doomsday prophecies are grounded in the **false analogy** between **human nature** and **computer nature**, or natural intelligence and artificial intelligence. We are thinking machines, but natural selection also designed into us **emotions** to **shortcut** the **thinking** process because natural intelligences are limited in speed and capacity by the number of neurons that can be crammed into a skull that has to pass through a pelvic opening at birth, whereas artificial intelligence need not be so restricted. We don't need to compute the caloric value of foods, for example, we just feel hungry. We don't need to calculate the waist-to-hip ratio of women or the shoulder-to-waist ratio of men in our quest for genetically healthy potential mates; we just feel attracted to someone and mate with them. We don't need to work out the genetic cost of raising someone else's offspring if our mate is unfaithful; we just feel jealous. We don't need to figure the damage of an unfair or non-reciprocal exchange with someone else; we just feel injustice and desire revenge. Emotions are **proxies** for getting us to act in ways that lead to an increase in reproductive success, particularly in response to threats faced by our Paleolithic ancestors. Anger leads us to strike out, fight back, and defend ourselves against danger. Fear causes us to pull back, retreat, and escape from risks. Disgust directs us to push out, eject, and expel that which is bad for us. Computing the odds of danger in any given situation takes too long. We need to **react instantly**. Emotions shortcut the information processing power needed by brains that would otherwise become bogged down with all the computations necessary for survival. Their purpose, in an ultimate causal sense, is to drive behaviors toward goals selected by evolution to **enhance survival** and reproduction. **AIs** -- even AGIs and ASIs -- will have **no need** of such emotions and so there would be no reason to program them in unless, say, terrorists chose to do so for their own evil purposes. But that's a human nature problem, not a computer nature issue. To believe that an ASI would be **"evil"** in any emotional sense is to assume a computer cognition that includes such psychological traits as **acquisitiveness**, competitiveness, vengeance, and bellicosity, which seem to be projections coming from the mostly **male writers** who **concoct** such **dystopias**, not features any **programmer** would **bother including**, assuming that it **could even be done**. What would it mean to program an emotion into a computer? When IBM's Deep Blue defeated chess master Garry Kasparov in 1997, did it feel **triumphant**, vengeful, or bellicose? **Of course not**. It **wasn't even "aware"** -- in the human sense of self-conscious knowledge -- that it was **playing chess**, much less feeling nervous about possibly losing to the reigning world champion (which it did in the first tournament played in 1996). In fact, toward the end of the first game of the second tournament, on the 44th move, Deep Blue made a legal but incomprehensible move of pushing its rook all the way to the last row of the opposition side. It accomplished nothing offensively or defensively, leading Kasparov to puzzle over it out of concern that he was missing something in the computer's strategy. It turned out to be an error in Deep Blue's programming that led to this fail-safe default move. It was a bug that Kasparov mistook as a feature, and as a result some chess experts contend it led him to be less confident in his strategizing and to second-guess his responses in the subsequent games. It even led him to suspect foul play and human intervention behind Deep Blue, and this paranoia ultimately cost him the tournamentt.[ 13] Computers don't get paranoid, the HAL 9000 computer in 2001 notwithstanding. Or consider **Watson**, the IBM computer built by David Ferrucci and his team of IBM research scientists tasked with designing an AI that could rival human champions at the game of Jeopardy! This was a far more formidable challenge than Deep Blue faced because of the prerequisite to understand language and the often multiple meanings of words, not to mention needing an encyclopedic knowledge of trivia (Watson had access to Wikipedia for this). After beating the all-time greatest Jeopardy! champions Ken Jennings and Brad Rutter in 2011, did Watson feel flushed with pride after its victory? Did Watson even know that it won Jeopardy!? I put the question to none other than Ferrucci himself at a dinner party in New York in conjunction with the 2011 Singularity Summit. His answer surprised me: "Yes, Watson knows it won Jeopardy!" I was skeptical. How could that be, since such self-awareness is not yet possible in computers? "Because **I told it** that it won," he replied with a wry smile. Sure, and you could even program Watson or Deep Blue to vocalize a Howard Dean-like victory scream when it wins, but that is still a **far cry** from a computer feeling triumphant. This brings to mind the **"hard problem" of consciousness** -- if we don't understand how this happens in humans, **how could we program it into computers?** As Steven Pinker elucidated in his answer to the 2015 Edge Question on what to think about machines that think, "AI dystopias project a **parochial alpha-male psychology** onto the **concept of intelligence**. They assume that superhumanly intelligent robots would develop **goals** like **deposing their masters** or **taking over the world."** It is **equally possible**, Pinker suggests, that "artificial intelligence will naturally develop along female lines: fully capable of solving problems, but with **no desire to annihilate innocents** or **dominate the civilization**."[ 14] So the fear that computers will become emotionally evil are unfounded, because without the suite of these evolved emotions it will **never occur to AIs** to take such actions against us. What about an ASI **inadvertently** causing our extinction by turning us into paperclips, or tiling the entire Earth's surface with solar panels? Such scenarios imply yet another emotion -- the feeling of **valuing** or **wanting something**. As the science writer Michael Chorost adroitly notes, when humans resist an AI from undertaking any form of global tiling, it "will have to be able to **imagine counteractions** and **want to carry them out**." Yet, "until an AI has feelings, it's going to be unable to **want to do anything at all**, let alone **act counter to humanity's interests** and **fight off human resistance**." Further, Chorost notes, "the minute an A.I. wants anything, it will live in a universe with rewards and punishments -- including punishments from us for behaving badly. In order to survive in a world dominated by humans, a nascent A.I. will have to develop a humanlike moral sense that certain things are right and others are wrong. By the time it's in a position to **imagine** tiling the Earth with solar panels, it'll **know that it would be morally wrong** to do so."[ 15] From here Chorost builds on an argument made by Peter Singer in The Expanding Circle (and Steven Pinker in The Better Angels of Our Nature[ 16] that I also developed in The Moral Arc[ 17] and Robert Wright explored in Nonzero[ 18]), and that is the propensity for natural intelligence to evolve moral emotions that include reciprocity, cooperativeness, and even altruism. Natural intelligences such as ours also includes the capacity to reason, and once you are on Singer's metaphor of the "escalator of reason" it can carry you upward to genuine morality and concerns about harming others. "Reasoning is inherently expansionist. It seeks universal application," Singer notes.[ 19] Chorost draws the implication: "AIs will have to step on the escalator of reason just like humans have, because they will need to **bargain for goods in a human-dominated economy** and they will face **human resistance to bad behavior**."[ 20] Finally, for an AI to get around this problem it would need to evolve emotions on its own, but the only way for this to happen in a world dominated by the natural intelligence called humans would be for **us** to **allow it to happen**, which we **wouldn't** because there's **time enough to see it coming**. **Bostrom's "treacherous turn" will come with road signs ahead** warning us that there's a sharp bend in the highway with enough time for us to grab the wheel. Incremental progress is what we see in most technologies, including and especially AI, which will continue to serve us in **the manner we desire and need**. Instead of Great Leap Forward or Giant Fall Backward, think Small Steps Upward. As I proposed in The Moral Arc, instead of Utopia or dystopia, think **protopia**, a term coined by the futurist Kevin Kelly, who described it in an Edge conversation this way: "I call myself a protopian, not a Utopian. I believe in progress in an incremental way where every year it's better than the year before but not by very much -- just a micro amount."[ 21] Almost all progress in science and technology, including computers and AI, is of a protopian nature. Rarely, if ever, do technologies lead to either Utopian or dystopian societies. Pinker agrees that there is **plenty of time** to plan for all conceivable contingencies and build safeguards into our AI systems. "They would not need any ponderous 'rules of robotics' or some newfangled **moral philosophy** to do this, just the same **common sense** that went into the design of **food processors**, **table saws**, **space heaters**, and **automobiles**." Sure, an ASI would be many orders of magnitude **smarter** than these machines, but Pinker reminds us of the **AI hyperbole** we've been fed for decades: "The