#### I negate the resolution resolved: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines

#### Interpretation: debaters must read their plan text as written on their documents

#### Violation: You didn’t.

#### What you read: 我不知道我说什么但是我很厉害。

#### Written on the document: 已解决：世界贸易组织成员国应该减少对药品的知识产权保护。

#### 1] Shiftiness-They can shift around their advocacy and justify different versions since it’s not set. CX doesn’t solve A] Not flowed B] skews all preround prep C] they can proactively lie or be shady

#### 2] Fairness: The only way to maintain substance is if the plan is in English, which everyone debating is required to understand. Alt args not topical.

#### 3] Safety: If I don’t understand your language, you could be reading scarring or abusive arguments that I wouldn’t understand until after the round.

#### Fairness is a voter because the judge needs to evaluate the better debater.

#### Education is a voter because it’s the only portable impact

#### Drop the debater to deter future abuse since it’s the most severe form of punishment

#### No RVIs 1) its illogical you don’t win by proving that you’re fair 2) encourages abusive args where debaters bait the RVI to win

#### Use competing interps it creates a race to the top so we set the best norms

#### NC theory outweighs – 1] norming 2] aff abuse frames neg

#### 1AR theory outweighs – 1] prevents infinite abuse 2] time skew

### 1AC – Framing

#### The standard is maximizing expected well-being.

#### 1] Only pleasure and pain are intrinsically valuable – all other frameworks collapse.

Moen 16 [Ole Martin Moen, Research Fellow in Philosophy at University of Oslo “An Argument for Hedonism” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281] TDI

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disval+uable. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store, I might ask: “What for?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good.3 As Aristotle observes: “We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that pleasure and pain are both places where we reach the end of the line in matters of value.

#### 2] Extinction first ..moral uncertainty.

Bostrom 12 [(Nick Bostrom, Faculty of Philosophy & Oxford Martin School University of Oxford) “Existential Risk Prevention as Global Priority.” Global Policy, 2012] TDI

These reflections on moral uncertainty suggest an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate. Our present understanding of axiology might well be confused. We may not now know — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet be able to imagine the best ends of our journey. If we are indeed profoundly uncertain about our ultimate aims, then we should recognize that there is a great option value in preserving — and ideally improving — our ability to recognize value and to steer the future accordingly. Ensuring that there will be a future version of humanity with great powers and a propensity to use them wisely is plausibly the best way available to us to increase the probability that the future will contain a lot of value. To do this, we must prevent any existential catastrophe.

#### 3] Actor specificity: A] Governments must aggregate since every policy benefit some and harms others, which also means side constraints freeze action. B] States lack wills or intentions since policies are collective actions. C] Actor-specificity comes first since different agents have different ethical standings.

#### 4] Ground – Both debaters have ground to engage under util – Aff gets plans, while Neg gets DAs and counterplans. AND anything can function under util if it has an external benefit. Other fwrks deny 1 side engagement on link and impact level. TJFs outweigh because concerns fairness – outweighs all args concede valid of fairness.

## 1: Universal IP waivers lead to global instability 1:25

#### Intellectual property rights cannot be discriminated on the basis of field, or place of invention

WTO <https://www.wto.org/english/docs_e/legal_e/27-trips_04c_e.htm>, Article 27.1, Section 5 on patents, World trade Organization, WTO, Part II — Standards concerning the availability, scope and use of Intellectual Property Rights

Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. [(5)](https://www.wto.org/english/docs_e/legal_e/27-trips_04c_e.htm#fnt-5) Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this Article, patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.

#### The WTO’s appellate body no longer exists to mediate disputes, without immediate buy in by states, and no mechanism to make disobedient states obey, the system collapses

Horton, 08/3, Lessons from Trump’s assault on the World Trade Organization, https://www.chathamhouse.org/2021/08/lessons-trumps-assault-world-trade-organization, Chatham House – International Affairs Think Tank, Communications Manager; Project Lead, Common Futures Conversations

The WTO is unique amongst international institutions because it has a powerful enforcement mechanism – the dispute settlement system. However, the fundamental vulnerability is that if powerful states like the US and others won’t participate in the system and be bound by its rules, they quickly risk becoming irrelevant. And that’s the situation we’re in right now with the appellate body crisis, where, without a functioning mechanism to ensure that WTO rules are enforced, the entire system of global trade rules risk collapsing. Ironically, the United States has been the leader of the liberal trading order for the past 70 years, but since Trump, it has become its leading saboteur.

#### A major country operating outside WTO consensus wrecks global trade norms

Bacchus 20 [James Bacchus, member of the Herbert A. Stiefel Center for Trade Policy Studies, the Distinguished University Professor of Global Affairs and director of the Center for Global Economic and Environmental Opportunity at the University of Central Florida, 12-16-2020, "An Unnecessary Proposal: A WTO Waiver of Intellectual Property Rights for COVID-19 Vaccines," Cato Institute, [https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines]/Kankee](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines%5d/Kankee)

In a sign of their increasing frustration with global efforts to ensure that all people everywhere will have access to COVID-19 vaccines, several developing countries have asked other members of the World Trade Organization (WTO) to join them in a sweeping waiver of the intellectual property (IP) rights relating to those vaccines. Their waiver request raises anew the recurring debate within the WTO over the right balance between the protection of IP rights and access in poorer countries to urgently needed medicines. But the last thing the WTO needs is another debate over perceived trade obstacles to public health. Unless WTO members reach a consensus, the multilateral trading system may be further complicated by a delay like that in resolving the two‐​decades‐​old dispute between developed and developing countries over the compulsory licensing and generic distribution of HIV/AIDS drugs. A new and contentious “North‐​South” political struggle definitely would not be in the interest of the developed countries, the developing countries, the pharmaceutical companies, or the WTO. Certainly it would not be in the interest of the victims and potential victims of COVID-19. Background In early October 2020, India and South Africa asked the members of the WTO to waive protections in WTO rules for patents, copyrights, industrial designs, and undisclosed information (trade secrets) in relation to the “prevention, containment or treatment of COVID-19 … until widespread vaccination is in place globally, and the majority of the world’s population has developed immunity.”1 India and South Africa want to give all WTO members freedom to refuse to grant or enforce patents and other IP rights relating to COVID-19 vaccines, drugs, diagnostics, and other technologies for the duration of the pandemic. In requesting the waiver, India and South Africa have argued that “an effective response to the COVID-19 pandemic requires rapid access to affordable medical products including diagnostic kits, medical masks, other personal protective equipment and ventilators, as well as vaccines and medicines for the prevention and treatment of patients in dire need.” They have said that “as new diagnostics, therapeutics and vaccines for COVID-19 are developed, there are significant concerns, how these will be made available promptly, in sufficient quantities and at affordable prices to meet global demand.”2 Later in October, the members of the WTO failed to muster the required consensus to move forward with the proposed waiver. The European Union, the United States, the United Kingdom, and other developed countries opposed the waiver request.3 One WTO delegate, from the United Kingdom, described it as “an extreme measure to address an unproven problem.”4 A spokesperson for the European Union explained, “There is no evidence that intellectual property rights are a genuine barrier for accessibility of COVID‐​19‐​related medicines and technologies.”5 In the absence of a consensus, WTO members have decided to postpone further discussion of the proposed waiver until early 2021. Balancing IP Rights and Access to Medicines Not New to WTO This waiver controversy comes nearly two decades after the end of the long battle in the multilateral trading system over access to HIV/AIDS drugs. At the height of the HIV/AIDS crisis at the turn of the century, numerous countries, including especially those from sub‐​Saharan Africa, could not afford the high‐​priced HIV/AIDS drugs patented by pharmaceutical companies in developed countries. Having spent billions of dollars on developing the drugs, the patent holders resisted lowering their prices. The credibility of the companies, the countries that supported them, and the WTO itself were all damaged by an extended controversy over whether patent rights should take precedence over providing affordable medicines for people afflicted by a lethal disease. Article 8 of the WTO Agreement on the Trade‐​Related Aspects of Intellectual Property Rights (the TRIPS Agreement) provides that WTO members “may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health … provided that such measures are consistent with the provisions of this Agreement.” In similar vein, Article 7 of the TRIPS Agreement provides that the “protection and enforcement of intellectual property rights” shall be “in a manner conducive to social and economic welfare.”6 It can be maintained that these two WTO IP rules are significantly capacious to include any reasonable health measures that a WTO member may take during a health emergency, such as a pandemic. Yet there was doubt among the members during the HIV/AIDS crisis about the precise reach of these provisions. As Jennifer Hillman of the Council on Foreign Relations observed, ordinarily the “inherent tension between the protection of intellectual property and the need to make and distribute affordable medicines” is “resolved through licensing, which allows a patent holder to permit others to make or trade the protected product—usually at a price and with some supervision from the patent holder to ensure control.”7 But, in public health emergencies, it may be impossible to obtain a license. In such cases, “compulsory licenses” can be issued to local manufacturers, authorizing them to make patented products or use patented processes even though they do not have the permission of the patent holders.8

#### Without all states buy in, we risk WW3

Hopewell and Horton 08-03 [Kristen Hopewell Associate Professor and Canada Research Chair in Global Policy at the University of British Columbia, and Ben Horton, Communications Manager; Project Lead, Common Futures Conversations, 08-03-2021, "Lessons from Trump’s assault on the World Trade Organization," Chatham House – International Affairs Think Tank, https://www.chathamhouse.org/2021/08/lessons-trumps-assault-world-trade-organization]/Kankee

What has this episode revealed about the strength of multilateral institutions such as the WTO, in the face of spoiling tactics from major powers? The WTO is unique amongst international institutions because it has a powerful enforcement mechanism – the dispute settlement system. However, the fundamental vulnerability is that if powerful states like the US and others won’t participate in the system and be bound by its rules, they quickly risk becoming irrelevant. And that’s the situation we’re in right now with the appellate body crisis, where, without a functioning mechanism to ensure that WTO rules are enforced, the entire system of global trade rules risk collapsing. Ironically, the United States has been the leader of the liberal trading order for the past 70 years, but since Trump, it has become its leading saboteur. What are the implications of a permanent collapse of the international trading system? The very real danger from such a breakdown is a return to what we saw in the 1930s. In response to the outbreak of the Great Depression, you had countries imposing trade barriers, blocking imports from other state, and a general escalation of tit-for-tat protectionism. This response wound up not only exacerbating the effects of the depression itself but has also been credited by some as paving the way for the outbreak of the second world war. The reason why institutions like the WTO were created in the first place was to prevent a recurrence of the 1930s protectionist trade spiral. The danger now – if those rules become meaningless and unenforceable – is the institutional foundations of postwar economic prosperity could unravel, throwing us back into economic chaos and potentially political disorder. What does the WTO’s future look like under new director-general Dr Okonjo-Iweala?

## 2: IP waiver decreases innovation

#### IPR key to innovation.

Bacchus 20 [(James, member of the Herbert A. Stiefel Center for Trade Policy Studies, the Distinguished University Professor of Global Affairs and director of the Center for Global Economic and Environmental Opportunity at the University of Central Florida. He was a founding judge and was twice the chairman—the chief judge—of the highest court of world trade, the Appellate Body of the World Trade Organization in Geneva, Switzerland) "An Unnecessary Proposal: A WTO Waiver of Intellectual Property Rights for COVID-19 Vaccines," Cato Institute, 12-16-2020, https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines] TDI

At the heart of this emerging trade debate is a belief by many people worldwide that all medicines should be “global public goods.” There is little room in such a belief for consideration of any rights to IP. As one group of United Nations human rights experts expressed: “There is no room for … profitability in decision‐​making about access to vaccines, essential tests and treatments, and all other medical goods, services and supplies that are at the heart of the right to the highest attainable standard of health for all.”[16](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref16) This view is myopic. Subordinating IP rights temporarily to pressing public needs during a pandemic or other global health emergency is one thing. Eliminating any consideration of “profitability” in all policymaking relating to “access to vaccines, essential tests and treatments, and all other medical goods, services and supplies” is quite another.[17](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref17) To be sure, there is a superficial moral appeal in such a view. But does this moral appeal hold up if such a “human rights” approach does not result in meeting those urgent public needs? With the belief that medicines should be “public goods,” there is literally no support in some quarters for the application of the WTO TRIPS Agreement to IP rights in medicines. Any protection of the IP rights in such goods is viewed as a violation of human rights and of the overall public interest. This view, though, does not reflect the practical reality of a world in which many medicines would simply not exist if it were not for the existence of IP rights and the protections they are afforded. Technically, IP rights are exceptions to free trade. A long‐​standing general discussion in the WTO has been about when these exceptions to free trade should be allowed and how far they should be extended. The continuing debate over IP rights in medicines is only the most emotional part of this overall conversation. Because developed countries have, historically, been the principal sources of IP rights, this lengthy WTO dispute has largely been between developed countries trying to uphold IP rights and developing countries trying to limit them. The debate over the discovery and the distribution of vaccines for COVID-19 is but the latest global occasion for this ongoing discussion. The primary justification for granting and protecting IP rights is that they are incentives for innovation, which is the main source for long‐​term economic growth and enhancements in the quality of human life. IP rights spark innovation by “enabling innovators to capture enough of the benefits of their own innovative activity to justify taking considerable risks.”[18](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref18) The knowledge from innovations inspired by IP rights spills over to inspire other innovations. The protection of IP rights promotes the diffusion, domestically and internationally, of innovative technologies and new know‐​how. Historically, the principal factors of production have been land, labor, and capital. In the new pandemic world, perhaps an even more vital factor[to innovation] is the creation of knowledge, which adds enormously to “the wealth of nations.” Digital and other economic growth in the 21st century is increasingly ideas‐​based and knowledge intensive. Without IP rights as incentives, there would be less new knowledge and thus less innovation. In the short term, undermining private IP rights may accelerate distribution of goods and services—where the novel knowledge that went into making them already exists. But in the long term, undermining private IP rights would eliminate the incentives that inspire innovation, thus preventing the discovery and development of knowledge for new goods and services that the world needs. This widespread dismissal of the link between private IP rights and innovation is perhaps best reflected in the fact that although the United Nations Sustainable Development Goals for 2030 aspire to “foster innovation,” they make no mention of IP rights.[19](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref19) As Stephen Ezell and Nigel Cory of the Information Technology and Innovation Foundation wrote, “A fundamental fault line in the debate over intellectual property pertains to the need to achieve a reasoned balance between access and exclusive rights.”[20](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref20) This fault line is much on display in the WTO rules on IP rights. These rules recognize that “intellectual property rights are private rights” and that rules and disciplines are necessary for “the provision of effective and appropriate means for the enforcement of trade‐​related intellectual property rights.”[21](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref21) Yet, where social and economic welfare is at stake, WTO members have sought to strike a balance in these rules between upholding IP rights and fulfilling immediate domestic needs.

#### Biopharmaceutical innovation is key to prevent future pandemics and bioterror.

Marjanovic and Feijao 20 [(Sonja Marjanovic, Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitative biology, Imperial College London; B.Sc. in biology, University of Lisbon.) "How to Best Enable Pharma Innovation Beyond the COVID-19 Crisis," RAND Corporation, 05-2020, https://www.rand.org/pubs/perspectives/PEA407-1.html] TDI

As key actors in the healthcare innovation landscape, pharmaceutical and life sciences companies have been called on to develop medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also infectious diseases that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a bioterrorism context.1 The general threat to public health that is posed by antimicrobial resistance is also well-recognised as an area in need of pharmaceutical innovation. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and competition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an indispensable partner in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceutical innovation in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is essential for socially responsible companies in the sector. 2 It is therefore unsurprising that we are seeing industry-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently contributing in a variety of ways. Examples include pharmaceutical companies donating existing compounds to assess their utility in the fight against COVID19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating trials for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accelerate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The primary purpose of such innovation is to benefit patients and wider population health. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be relatively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pressure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing combination product that is being tested for therapeutic potential against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider how pharmaceutical innovation for responding to emerging infectious diseases can best be enabled beyond the current crisis. Many public health threats (including those associated with other infectious diseases, bioterrorism agents and antimicrobial resistance) are urgently in need of pharmaceutical innovation, even if their impacts are not as visible to society as COVID-19 is in the immediate term. The pharmaceutical industry has responded to previous public health emergencies associated with infectious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contributions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still low.12 There are important policy questions as to whether – and how – industry could engage with such public health threats to an even greater extent under improved innovation conditions.

#### Bioterror causes extinction, bioweapons uniquely appeal to terrorists.

Krstić '17 [Marko; January 2017; assistant professor of microelectronics and physics at the University of Belgrade, PhD in Electrical Engineering and Computer Science from the University of Belgrade; "Tendency of using chemical, biological, radiological and nuclear weapons for terrorist purposes," Military Technical Courier, Vol. 65, No. 2, p. 481-498] SC SD

The studies of a few cases of earlier CBRN actions have led experts to identify the key characteristics **of** terrorist groups **that could potentially have an interest to** use **these** weapons. It is thought that conservatism is inherent in terrorist organizations, but it must not be forgotten that **some terrorists are inclined to** innovations **in** weapons **and** tactics**, as well as to** taking risks **in actions or in the choice of weapons.** Many experts agree that most terrorist organizations want to use proven methods to achieve desired effects. Innovations, especially in the field of CBRN weapons, often indicate **terrorists are likely to be led by other factors rather than by pure curiosity and desire to experiment**. For some individuals, repression and democratic and strong rule of law are positive determinants of the emergence of CBRN actions which points to a new and more complex global security environment with an increasing risk of terrorists trying to perform a CBRN attack. It is a frightening fact that **a** single **terrorist or isolated terrorist group could improvise a** biological weapon **or use other ways to spread** anthrax, smallpox **or other biological agents and thereby cause** mass casualties and destroy the health care system of a state. CBRN weapons are secretly shipped to terrorists or hostile governments and represent a significant and growing threat to many countries. Although the threat of CBRN attacks is widely recognized as the central issue of national security, most analysts assume that the primary danger is a threat of the military use of these weapons in conventional wars with traditional military means while the threat of covert attacks, which includeterrorism**, is rashly and unfairly neglected**. Covert attacks are difficult to deter or prevent and CBRN weapons suitable for this type of attack are available to a growing number of enemy states and groups. At the same time, restrictions on their use appear to be diminishing, and so-called new terrorists do not always escalate and become apparent only by using unconventional weapons. These **weapons** are easily spread or transmitted from person to person, **have a** high mortality rate **and a potential impact on public health,** causing mass casualties that can crush health systems and cause public panic and social disruption, thus requiring special efforts to suppress them. When assessing the threat of CBRN weapons, we should take into account the change in capacity to carry out terrorist attacks that are on the rise among countries and non-government elements. Analysts believe that the fear of chemical and biological terrorist attacks is excessive, they point out that, in the past, very few attacks involved these weapons, and even those few attempts that have occurred were mostly thwarted by the authorities. A relative ease with which biological weapons can be obtained, along with other current changes and turbulences in the world, sets the stage for another type of warfare in the 21st century. The potential for CBRN terrorism has widely grown since 11 September, when some of these materials were used. The danger of terrorist use of nuclear weapons and other weapons of mass destruction represents a very serious threat for many countries; **if a terrorist group could gain access to this weapon, it is** highly likely it would use it, or threaten to use it. Although there is very little information on terrorists and their ability to come into possession of nuclear weapons or on their intentions to get them, the risk of CBRN weapons has certainly increased since the terrorists started to become more familiar with these agents and their harmful consequences. Discovering the nature of the threat of biological weapons, as well as the appropriate response to them requires an emphasis on the biological characteristics of these instruments of war and terror. Preparing for a terrorist attack may seem daunting and there are a small number of people with practical experience and a good knowledge of CBRN weapons, because until recently there was no need to own them. In the past, most of the planning regarding emergency response to terrorism concentrated on the concerns of open attacks (bombing). However, the threats of CBRN weapons are taken seriously, especially in the USA, where media, fascinated by new weapons of mass destruction, encourage a growing fear for public safety. Terrorists who have significant human and material resources are much more likely to realize their intentions than lone perpetrators or small terrorist groups. A CBRN terrorism threat is certainly a matter of concern; however, terrorists will face many obstacles in the implementation of an attack of this kind. This includes the acquisition of materials and preparation for spreading them as well as a selection and a survey of a chosen objective and a correct dose required to achieve a desired effect. The growing threat of CBRN terrorism Terrorism can be defined as a deliberate act of violence intended to cause damage, but also to create an appropriate political and ideological situation, so that the use of these non-traditional weapons of terror outside the context is obvious, and the goals will not be military, but civilian ones (Bioterrorism, chemical weapons, and radiation terrorism, nd). Toxic substances, regardless of whether they are of animal, vegetable or mineral origin, were used throughout the history for political assassinations and sabotage; despite the risk of severe penalties, the prospects for success favoured the use of toxic substances. Such use has always been reduced, however, since only a small number of people had access to substances and possessed the ability of learn how to use them (Pascal, 1999). CBRN weapons are rightly viewed with a special sense of horror, their effects can be devastating and indiscriminating, and they take the most stringent toll among the most vulnerable population, non-combatants (e.g. a biological attack cannot be detected sufficiently fast after the disease spreads through the population). Moreover, chemical **and** biological **weapons are a particularly** attractive alternative for groups that do not have the ability to produce nuclear weapons, and this risk raises complex but important ethical issues (London, 2003). The common name for CBRN terrorism which causes the death of a large number of people, large scale damage and a strong echo worldwide is post-industrial or hyper-terrorism. This means that non-state elements possess and dispose of assets that were previously held only by states, but unlike them, which often fear reprisals after WMD attacks, terrorists, having no geographical location, are ready to use WMD with much less scrupulousness and fear (Kurmnik, Ribnikar, 2003). Some authors have described the factors that make chemical, biological, radiological and nuclear terrorist attacks in many ways unique and demanding, such as an element of surprise, invisible agents, ordnance, the risk of repetition and new types of risks (Ruggiero, Voss, 2015). In the past 30 years, the use of CBRN weapons has become a major concern for many nations around the world. The public has become insensitive to traditional terrorist attacks that seem to be a less efficient way for terrorist organizations to achieve their goals. What causes shock and fear is actually presenting the properties of weapons which can be used by terrorist organizations to enhance their efforts and the effectiveness of attacks. CBRN terrorism is often a synonym for weapons of mass destruction, although this form of terrorism and related incidents do not require attacks and inflicting harm to large numbers of people they do not even require deadly attacks at all. The number of studies on this type of terrorism is limited due to the lack of available data on this terrorism type. There is a very small number of databases of CBRN incidents, and even the existing ones have relatively little to do with them and they are compared to conventional terrorism (Jesse, 2012). Some experts emphasize the factors that promote such attacks and these factors include the availability of information and expertise, increased frustration of terrorists, demonization of the target population, as well as a millennial, apocalyptic or messianic vision. Experts also differ in opinion when it comes to possible perpetrators of CBRN incidents, and include religious fundamentalists and cults1 as possible perpetrators of such attacks, especially when these groups address to ethereal audience, emphasizing the hatred of unbelievers (Ivanova, Sandler, 2007). Concerns about super terrorism which involves the use of CBRN weapons are mainly focused on what terrorists can do in the context of our social reality, with an emphasis on terrorist motivations, initiatives and limitations. When considering which terrorist groups may be inclined to commit CBRN terrorism, it is important to recognize the spectrum of these acts, as well as to analyze the following categorization: (a) massive casualty events produced by conventional weapons; (b) CBRN scams; (c) conventional attack on a nuclear facility; (d) limited-scale chemical or biological attack or a radiological dispersion; (e) large scale chemical or biological attack or a radiological dispersion; and (f) CBRN strikes (super terrorism) that can lead to thousands of victims. In addition to the motivation and willingness to inflict mass casualties in any way, terrorists must have technical and financial capabilities to come into possession of material and acquire skills for these types of weapons and materials and carry out a successful attack. Chemical and biological weapons can pose a risk to terrorists thus deterring them from using such weapons (Post, 2005, pp.148-151). The possibility that terrorists use chemical or biological substances may increase over the next decade, according to US intelligence agencies. According to CIA2, an interest among non-state actors, including terrorists**, for biological and chemical materials is real and growing, and** the number of potential perpetrators is increasing. The agency also noted that many of these groups had developed an international network and did not need to rely on state sponsors for financial and technical support. However, it is believed that it is less likely that terrorists would choose chemical and biological weapons over conventional explosives, because these weapons are difficult to control and their results are unpredictable (Condesman, Burke, 2001). The risk of CBRN weapons is growing since terrorists are better acquainted with these agents and their potential for causing harm3. These agents possess desirable characteristics as **weapons** of terror; they **are biologically invisible to the naked eye,** odorless **and potentially** lethal **in the form of particles**; natural organisms are so readily available, and can be "camouflaged" in natural disasters and used to spread fear and various diseases. Chemical agents quickly attack the critical physiological centers of the body, disabling or killing the victim. Biological and chemical weapons require the application of huge amounts of resources and result in different effects, causing fear and panic in the contaminated areas. Often referred to as "weapons of mass destruction", but, in medical terms, they are weapons of potential mass casualties because they can lead to massive death toll in the absence of preventive measures and timely response (Meyer, Spinella, 2014, pp.645-656). "Bioterrorism is the intentional use of microorganisms or toxins derived from living organisms used for hostile purposes intended to cause disease or death in man, animals and plants, on which they depend". The threat of bioterrorist attacks is real, and each individual is a potential terrorist, when terrorists are "invisible" prior to an attack which also can be "invisible" in the form of causing infectious diseases or epidemics. Citizens who are not aware they are infected are potential safety hazard and so-called dangerous bodies (Mijalković, 2011). In the last ten years, the issue of CBRN weapons has attracted the attention of experts, but a list of priorities by the heads of states has never been established. Biological weapons almost became forgotten after they had been banned by the 1972 Convention on Biological Weapons. A significant attention was paid to them during the 90s of the last century. The important thing is that biological weapons attract much less attention than other similar weapons, but probably represent the greatest danger, and in addition to their use in war, they are available as instruments of terror in peace. Some countries showed willingness to use such weapons against defenseless populations to achieve strategic objectives, and in this regard, some analysts believe that those who attacked the World Trade Center in 1993 applied cyanide on their bombs (this was not confirmed, but a large amount of cyanide was found in possession of the perpetrators). Such a group will prove to be less inefficient, because if terrorists decide to shock and surprise the government by inflicting enormous damage, CBRN weapons will become more attractive and more accessible (Bettis, 1998). Motives and forms of behavior of individuals and groups who acquired or used CBRN weapons have existed since long ago and there is no doubt that modern society is vulnerable to such attacks (Tucker, 2000). Fear of biological terrorism is certainly greater than the fear of the conventional forms of terrorism; some of these fears are justified and some are often exaggerated. Some agents are really very contagious and deadly, and if used properly, have a potential to result in casualties similar to those in a nuclear attack. Perhaps the scariest aspect of biological weapons is that the body is attacked without warning, people are afraid of the threat as it is invisible, and cannot be heard or felt. The history of warfare, terrorism and crime involving biological agents in the last century is considerably less dangerous and more deadly than the history of conventional warfare (Parachini, 2001). Today, some states and some terrorist groups can more easily overcome technological barriers due to the increased flow of information and access to previously unavailable technologies. Along with nuclear and chemical weapons, biological weapons are part of an unholy trinity of weapons of mass destruction (Davis, Johnson-Winegar, 2000, pp.15-28). The **society is now faced with the threat of an** apocalyptic and asymmetric war **scenario** in which kamikaze attackers are able to arm themselves with WMD4 without even having to have a "physical" weapon to create fear; they probably still prefer simple, proven methods: a stampede in an enclosed place, or just an explosive device, which will kill many people5 (Palmer, 2004, pp.3-9). Early detection and response to biological or chemical terrorism are crucial to solving this problem (U.S. Congress House, 2003, p.117).

#### Neurological, racial bias is flexible and determined by coalitional habit forming in the brain – orienting groups around institutional change best breaks down bias. This is offense because their theory rejects these solutions.

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The city of Baltimore was rocked by protests and riots over the death of Freddie Gray, a 25-year-old African American man who died in police custody. Tragically, Gray’s death was only one of a recent in a series of racially-charged, often violent, incidents. On April 4th, Walter Scott was fatally shot by a police officer after fleeing from a routine traffic stop. On March 8th, Sigma Alpha Epsilon fraternity members were caught on camera gleefully chanting, “There Will Never Be A N\*\*\*\*\* In SAE.” On March 1st, a homeless Black man was shot in broad daylight by a Los Angeles police officer. And these are not isolated incidents, of course. Institutional and systemic racism reinforce discrimination in countless situations, including hiring, sentencing, housing, and even mortgage lending. It would be easy to see in all this powerful evidence that racism is a permanent fixture in America’s social fabric and even, perhaps, an inevitable aspect of human nature. Indeed, the mere act of labeling others according to their age, gender, or race is a reflexive habit of the human mind. Social categories, like race, impact our thinking quickly, often outside of our awareness. Extensive research has found that these implicit racial biases—negative thoughts and feelings about people from other races—are automatic, pervasive, and difficult to suppress. Neuroscientists have also explored racial prejudice by exposing people to images of faces while scanning their brains in fMRI machines. Early studies found that when people viewed faces of another race, the amount of activity in the amygdala—a small brain structure associated with experiencing emotions, including fear—was associated with individual differences on implicit measures of racial bias. This work has led many to conclude that racial biases might be part of a primitive—and possibly hard-wired—neural fear response to racial out-groups. There is little question that categories such as race, gender, and age play a major role in shaping the biases and stereotypes that people bring to bear in their judgments of others. However, research has shown that how people categorize themselves may be just as fundamental to understanding prejudice as how they categorize others. When people categorize themselves as part of a group, their self-concept shifts from the individual (“I”) to the collective level (“us”). People form groups rapidly and favor members of their own group even when groups are formed on arbitrary grounds, such as the simple flip of a coin. These findings highlight the remarkable ease with which humans form coalitions. Recent research confirms that coalition-based preferences trump race-based preferences. For example, both Democrats and Republicans favor the resumes of those affiliated with their political party much more than they favor those who share their race. These coalition-based preferences remain powerful even in the absence of the animosity present in electoral politics. Our research has shown that the simple act of placing people on a mixed-race team can diminish their automatic racial bias. In a series of experiments, White participants who were randomly placed on a mixed-race team—the Tigers or Lions—showed little evidence of implicit racial bias. Merely belonging to a mixed-race team trigged positive automatic associations with all of the members of their own group, irrespective of race. Being a part of one of these seemingly trivial mixed-race groups produced similar effects on brain activity—the amygdala responded to team membership rather than race. Taken together, these studies indicate that momentary changes in group membership can override the influence of race on the way we see, think about, and feel toward people who are different from ourselves. Although these coalition-based distinctions might be the most basic building block of bias, they say little about the other factors that cause group conflict. Why do some groups get ignored while others get attacked? Whenever we encounter a new person or group we are motivated to answer two questions as quickly as possible: “is this person a friend or foe?” and “are they capable of enacting their intentions toward me?” In other words, once we have determined that someone is a member of an out-group, we need to determine what kind? The nature of the relations between groups—are we cooperative, competitive, or neither?—and their relative status—do you have access to resources?—largely determine the course of intergroup interactions. Groups that are seen as competitive with one’s interests, and capable of enacting their nasty intentions, are much more likely to be targets of hostility than more benevolent (e.g., elderly) or powerless (e.g., homeless) groups. This is one reason why sports rivalries have such psychological potency. For instance, fans of the Boston Red Sox are more likely to feel pleasure, and exhibit reward-related neural responses, at the misfortunes of the archrival New York Yankees than other baseball teams (and vice versa)—especially in the midst of a tight playoff race. (How much fans take pleasure in the misfortunes of their rivals is also linked to how likely they would be to harm fans from the other team.) Just as a particular person’s group membership can be flexible, so too are the relations between groups. Groups that have previously had cordial relations may become rivals (and vice versa). Indeed, psychological and biological responses to out-group members can change, depending on whether or not that out-group is perceived as threatening. For example, people exhibit greater pleasure—they smile—in response to the misfortunes of stereotypically competitive groups (e.g., investment bankers); however, this malicious pleasure is reduced when you provide participants with counter-stereotypic information (e.g., “investment bankers are working with small companies to help them weather the economic downturn). Competition between “us” and “them” can even distort our judgments of distance, making threatening out-groups seem much closer than they really are. These distorted perceptions can serve to amplify intergroup discrimination: the more different and distant “they” are, the easier it is to disrespect and harm them. Thus, not all out-groups are treated the same: some elicit indifference whereas others become targets of antipathy. Stereotypically threatening groups are especially likely to be targeted with violence, but those stereotypes can be tempered with other information. If perceptions of intergroup relations can be changed, individuals may overcome hostility toward perceived foes and become more responsive to one another’s grievances. The flexible nature of both group membership and intergroup relations offers reason to be cautiously optimistic about the potential for greater cooperation among groups in conflict (be they black versus white or citizens versus police). One strategy is to bring multiple groups together around a common goal. For example, during the fiercely contested 2008 Democratic presidential primary process, Hillary Clinton and Barack Obama supporters gave more money to strangers who supported the same primary candidate (compared to the rival candidate). Two months later, after the Democratic National Convention, the supporters of both candidates coalesced around the party nominee—Barack Obama—and this bias disappeared. In fact, merely creating a sense of cohesion between two competitive groups can increase empathy for the suffering of our rivals. These sorts of strategies can help reduce aggression toward hostile out-groups, which is critical for creating more opportunities for constructive dialogue addressing greater social injustices. Of course, instilling a sense of common identity and cooperation is extremely difficult in entrenched intergroup conflicts, but when it happens, the benefits are obvious. Consider how the community leaders in New York City and Ferguson responded differently to protests against police brutality—in NYC political leaders expressed grief and concern over police brutality and moved quickly to make policy changes in policing, whereas the leaders and police in Ferguson responded with high-tech military vehicles and riot gear. In the first case, multiple groups came together with a common goal—to increase the safety of everyone in the community; in the latter case, the actions of the police likely reinforced the “us” and “them” distinctions. Tragically, these types of conflicts continue to roil the country. Understanding the psychology and neuroscience of social identity and intergroup relations cannot undo the effects of systemic racism and discriminatory practices; however, it can offer insights into the psychological processes responsible for escalating the tension between, for example, civilians and police officers. Even in cases where it isn’t possible to create a common identity among groups in conflict, it may be possible to blur the boundaries between groups. In one recent experiment, we sorted participants into groups—red versus blue team—competing for a cash prize. Half of the participants were randomly assigned to see a picture of a segregated social network of all the players, in which red dots clustered together, blue dots clustered together, and the two clusters were separated by white space. The other half of the participants saw an integrated social network in which the red and blue dots were mixed together in one large cluster. Participants who thought the two teams were interconnected with one another reported greater empathy for the out-group players compared to those who had seen the segregated network. Thus, reminding people that individuals could be connected to one another despite being from different groups may be another way to build trust and understanding among them. A mere month before Freddie Gray died in police custody, President Obama addressed the nation on the 50th anniversary of Bloody Sunday in Selma: “We do a disservice to the cause of justice by intimating that bias and discrimination are immutable, or that racial division is inherent to America. To deny…progress – our progress – would be to rob us of our own agency; our responsibility to do what we can to make America better." The president was saying that we, as a society, have a responsibility to reduce prejudice and discrimination. These recent findings from psychology and neuroscience indicate that we, as individuals, possess this capacity. Of course this capacity is not sufficient to usher in racial equality or peace. Even when the level of prejudice against particular out-groups decreases, it does not imply that the level of institutional discrimination against these or other groups will necessarily improve. Ultimately, only collective action and institutional evolution can address systemic racism. The science is clear on one thing, though: individual bias and discrimination are changeable. Race-based prejudice and discrimination, in particular, are created and reinforced by many social factors, but they are not inevitable consequences of our biology**.** Perhaps understanding how coalitional thinking impacts intergroup relations will make it easier for us to affect real social change going forward.