## OFF

### 1NC – Definitions

#### Interpretation: the aff must only claim their offense from the topic.

#### “Resolved” means enactment of a law.

Words and Phrases 64 Words and Phrases Permanent Edition (Multi-volume set of judicial definitions). “Resolved”. 1964.

Definition of the word **“resolve,”** given by Webster is “to express an opinion or determination by resolution or vote; as ‘it was resolved by the legislature;” It **is** of **similar** force **to the word “enact,”** which is defined by Bouvier as **meaning “to establish by law”.**

#### Here is a list of the member nations of the WTO – aff is not that

WTO 7/29/16 [World Trade Organization, “Updated Member List”] [DS]

Members and Observers

164 members since 29 July 2016 , with dates of WTO membership.

Click any member to see key information on trade statistics, WTO commitments, disputes, trade policy reviews, and notifications.

A

Afghanistan — 29 July 2016

Albania — 8 September 2000

Angola — 23 November 1996

Antigua and Barbuda — 1 January 1995

Argentina — 1 January 1995

Armenia — 5 February 2003

Australia — 1 January 1995

Austria — 1 January 1995

B

Bahrain, Kingdom of — 1 January 1995

Bangladesh — 1 January 1995

Barbados — 1 January 1995

Belgium — 1 January 1995

Belize — 1 January 1995

Benin — 22 February 1996

Bolivia, Plurinational State of — 12 September 1995

Botswana — 31 May 1995

Brazil — 1 January 1995

Brunei Darussalam — 1 January 1995

Bulgaria — 1 December 1996

Burkina Faso — 3 June 1995

Burundi — 23 July 1995

C

Cabo Verde — 23 July 2008

Cambodia — 13 October 2004

Cameroon — 13 December 1995

Canada — 1 January 1995

Central African Republic — 31 May 1995

Chad — 19 October 1996

Chile — 1 January 1995

China — 11 December 2001

Colombia — 30 April 1995

Congo — 27 March 1997

Costa Rica — 1 January 1995

Côte d’Ivoire — 1 January 1995

Croatia — 30 November 2000

Cuba — 20 April 1995

Cyprus — 30 July 1995

Czech Republic — 1 January 1995

D

Democratic Republic of the Congo — 1 January 1997

Denmark — 1 January 1995

Djibouti — 31 May 1995

Dominica — 1 January 1995

Dominican Republic — 9 March 1995

E

Ecuador — 21 January 1996

Egypt — 30 June 1995

El Salvador — 7 May 1995

Estonia — 13 November 1999

Eswatini — 1 January 1995

European Union (formerly EC) — 1 January 1995

F

Fiji — 14 January 1996

Finland — 1 January 1995

France — 1 January 1995

G

Gabon — 1 January 1995

Gambia — 23 October 1996

Georgia — 14 June 2000

Germany — 1 January 1995

Ghana — 1 January 1995

Greece — 1 January 1995

Grenada — 22 February 1996

Guatemala — 21 July 1995

Guinea — 25 October 1995

Guinea-Bissau — 31 May 1995

Guyana — 1 January 1995

H

Haiti — 30 January 1996

Honduras — 1 January 1995

Hong Kong, China — 1 January 1995

Hungary — 1 January 1995

I

Iceland — 1 January 1995

India — 1 January 1995

Indonesia — 1 January 1995

Ireland — 1 January 1995

Israel — 21 April 1995

Italy — 1 January 1995

J

Jamaica — 9 March 1995

Japan — 1 January 1995

Jordan — 11 April 2000

K

Kazakhstan — 30 November 2015

Kenya — 1 January 1995

Korea, Republic of — 1 January 1995

Kuwait, the State of — 1 January 1995

Kyrgyz Republic — 20 December 1998

L

Lao People’s Democratic Republic — 2 February 2013

Latvia — 10 February 1999

Lesotho — 31 May 1995

Liberia — 14 July 2016

Liechtenstein — 1 September 1995

Lithuania — 31 May 2001

Luxembourg — 1 January 1995

M

Macao, China — 1 January 1995

Madagascar — 17 November 1995

Malawi — 31 May 1995

Malaysia — 1 January 1995

Maldives — 31 May 1995

Mali — 31 May 1995

Malta — 1 January 1995

Mauritania — 31 May 1995

Mauritius — 1 January 1995

Mexico — 1 January 1995

Moldova, Republic of — 26 July 2001

Mongolia — 29 January 1997

Montenegro — 29 April 2012

Morocco — 1 January 1995

Mozambique — 26 August 1995

Myanmar — 1 January 1995

N

Namibia — 1 January 1995

Nepal — 23 April 2004

Netherlands — 1 January 1995

New Zealand — 1 January 1995

Nicaragua — 3 September 1995

Niger — 13 December 1996

Nigeria — 1 January 1995

North Macedonia — 4 April 2003

Norway — 1 January 1995

O

Oman — 9 November 2000

P

Pakistan — 1 January 1995

Panama — 6 September 1997

Papua New Guinea — 9 June 1996

Paraguay — 1 January 1995

Peru — 1 January 1995

Philippines — 1 January 1995

Poland — 1 July 1995

Portugal — 1 January 1995

Q

Qatar — 13 January 1996

R

Romania — 1 January 1995

Russian Federation — 22 August 2012

Rwanda — 22 May 1996

S

Saint Kitts and Nevis — 21 February 1996

Saint Lucia — 1 January 1995

Saint Vincent and the Grenadines — 1 January 1995

Samoa — 10 May 2012

Saudi Arabia, Kingdom of — 11 December 2005

Senegal — 1 January 1995

Seychelles — 26 April 2015

Sierra Leone — 23 July 1995

Singapore — 1 January 1995

Slovak Republic — 1 January 1995

Slovenia — 30 July 1995

Solomon Islands — 26 July 1996

South Africa — 1 January 1995

Spain — 1 January 1995

Sri Lanka — 1 January 1995

Suriname — 1 January 1995

Sweden — 1 January 1995

Switzerland — 1 July 1995

T

Chinese Taipei — 1 January 2002

Tajikistan — 2 March 2013

Tanzania — 1 January 1995

Thailand — 1 January 1995

Togo — 31 May 1995

Tonga — 27 July 2007

Trinidad and Tobago — 1 March 1995

Tunisia — 29 March 1995

Turkey — 26 March 1995

U

Uganda — 1 January 1995

Ukraine — 16 May 2008

United Arab Emirates — 10 April 1996

United Kingdom — 1 January 1995

United States — 1 January 1995

Uruguay — 1 January 1995

V

Vanuatu — 24 August 2012

Venezuela, Bolivarian Republic of — 1 January 1995

Viet Nam — 11 January 2007

Y

Yemen — 26 June 2014

Z

Zambia — 1 January 1995

Zimbabwe — 5 March 1995

Observer governments

Algeria

Andorra

Azerbaijan

Bahamas

Belarus

Bhutan

Bosnia and Herzegovina

Comoros

Curaçao

Equatorial Guinea

Ethiopia

Holy See

Iran

Iraq

Lebanese Republic

Libya

Sao Tomé and Principe

Serbia

Somalia

South Sudan

Sudan

Syrian Arab Republic

Timor-Leste

Turkmenistan

Uzbekistan

#### IP protections cover patents, industrial design, trademarks, geographical indications, and copyright/related rights.

WIPO 20 [World Intellectual Property Organization, an agency of the UN; “What is Intellectual Property?”] [DS]

1 IP covers a vast range of activities, and plays an important role in both cultural and economic life. This importance is recognized by various laws which protect intellectual property rights. IP law is complicated: there are different laws relating to different types of IP, and different national laws in different countries and regions of the world as well as international law. This booklet introduces the main types of IP and explains how the law protects them. It also introduces the work of the World Intellectual Property Organization (WIPO), the United Nations agency dedicated to making IP work for innovation and creativity. Intellectual property (IP) refers to creations of the mind – everything from works of art to inventions, computer programs to trademarks and other commercial signs. What is IP? What 2 is IP? Why does IP matter? The progress and well-being of humanity depend on our capacity to come up with new ideas and creations. Technological progress requires the development and application of new inventions, while a vibrant culture will constantly seek new ways to express itself. Intellectual property rights are also vital. Inventors, artists, scientists and businesses put a lot of time, money, energy and thought into developing their innovations and creations. To encourage them to do that, they need the chance to make a fair return on their investment. That means giving them rights to protect their intellectual property. IP rights Essentially, intellectual property rights such as copyright, patents and trademarks can be viewed like any other property right. They allow the creators or owners of IP to benefit from their work or from their investment in a creation by giving them control over how their property is used. IP rights have long been recognized within various legal systems. For example, patents to protect inventions were granted in Venice as far back as the fifteenth century. Modern initiatives to protect IP through international law started with the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886). These days, there are more than 25 international treaties on IP administered by WIPO. IP rights are also safeguarded by Article 27 of the Universal Declaration of Human Rights. Creativity and inventiveness are vital. They spur economic growth, create new jobs and industries, and enhance the quality and enjoyment of life. What is IP?3 Striking a balance The intellectual property system needs to balance the rights and interests of different groups: of creators and consumers; of businesses and their competitors; of high- and low-income countries. An efficient and fair IP system benefits everyone – including ordinary users and consumers. Some examples: •The multibillion-dollar film, recording, publishing and software industries – which bring pleasure to millions of people worldwide – would not thrive without copyright protection. •The patent system rewards researchers and inventors while also ensuring that they share their knowledge by making patent applications publicly available, which helps stimulate more innovation. •Trademark protection discourages counterfeiting, so businesses can compete on a level playing field and users can be confident they are buying the genuine article. Different types and categories of IP IP is often divided into two main categories: Industrial property includes patents for inventions, industrial designs, trademarks and geographical indications. Copyright and related rights cover literary, artistic and scientific works, including performances and broadcasts. Different types and categories of IP IP is often divided into two main categories: Industrial property includes patents for inventions, industrial designs, trademarks and geographical indications. Copyright and related rights cover literary, artistic and scientific works, including performances and broadcasts. Patents 4 Patents were one of the first types of intellectual property to be recognized in modern legal systems. Today, patented inventions pervade every aspect of life, from electric lighting (patents held by Edison and Swan) to the iPhone (patents held by Apple). Patents By patenting an invention, the patent owner gets exclusive rights over it, meaning that he or she can stop anyone from using, making or selling the invention without permission. The patent lasts for a limited period of time, generally 20 years. In return, the patent owner has to disclose full details of the invention in the published patent documents. Once the period of protection has come to an end, the invention becomes off patent, meaning anyone is free to make, sell or use it. In this way, the patent system aims to benefit everyone: • Firms and inventors can maximize profits from their inventions during the patent protection period. •This rewards them for their effort and so encourages more innovation, which in turn benefits consumers and the general public. • Disclosure of the invention adds to the body of public knowledge, enabling and inspiring further research and invention. Patents What can be patented? An invention can be defined as a product or process that offers a new way of doing something, or a new technical solution to a problem. To qualify for patent protection, an invention must be of some practical use and must offer something new which is not part of the existing body of knowledge in the relevant technical field (what lawyers call the prior art). But these requirements of utility and novelty are not enough; the invention must also involve an inventive step – something non-obvious that could not just have been deduced by someone with average knowledge of the technical field. Furthermore, the invention must not fall under non-patentable subject matter. Patent laws in many countries, for example, exclude scientific theories, mathematical methods, plant or animal varieties, discoveries of natural substances, commercial methods and methods of medical treatment (as opposed to medical products) as not generally patentable. 5 Patents 6 Obtaining a patent Like most IP rights, patents are territorial: protection is granted within a country under its national law. Different countries have somewhat different laws, but generally in order to gain protection, an inventor or firm will need to file an application with a patent office describing the invention clearly and in sufficient detail to allow someone with an average knowledge of the technical field to use or reproduce it. Such descriptions usually include drawings, plans or diagrams. The application also contains various claims, that is, information to help determine the extent of protection to be granted by the patent. The application will then be examined by the patent office to determine if it qualifies for protection. Patent rights and enforcement Patent owners have the exclusive right to commercially make, sell, distribute, import and use their patented inventions within the territory covered by the patent during the period of protection. They may choose to make, sell or use the invention themselves, let someone else make or use it for a fee (known as licensing), or sell the patent outright to someone else who then becomes the patent owner. Or they may decide not to use the patented invention themselves, but to stop their competitors from using it during the patent period. If someone else uses a patented invention without the patent owner’s permission, the patent owner can seek to enforce the rights by suing for patent infringement in the relevant national court. Courts usually have the power to stop infringing behavior and may also award financial compensation to the patent owner for the unauthorized use of the invention. But a patent can also be challenged in court, and if it is judged to be invalid, for example because the court decides it is insufficiently novel, it will be struck down and the owner will lose protection in that territory. Patents 7 National, regional and international protection Inventors and firms must decide in which territories they want patent protection. Each patent office usually charges fees for filing and processing applications, plus periodic fees for maintaining a patent once it has been granted. The cost of dealing with different national legal systems can be high, as laws and practices can vary widely and applicants will usually need to pay for representation by an authorized patent agent in each country. Several groups of countries have developed regional patent systems that help reduce these costs, for example the African Regional Intellectual Property Organization (ARIPO). Under most of these systems, an applicant requests protection for an invention in one or more countries in the group, and each country then decides whether to offer patent protection within its borders. WIPO administers the PCT System, an international system that allows applicants to request protection under the Patent Cooperation Treaty in as many signatory states as they wish through a single application. Industrial designs 8 These aesthetic aspects can be hugely important in the modern economy. Nowadays consumers face an enormous choice of products, including many that offer the same basic functionality. So they will tend to choose the one with the design they find most attractive within their price range. Industrial designs are applied to a wide variety of industrial products and handmade goods: cars, telephones, computers, packaging and containers, technical and medical instruments, watches, jewelry, electrical appliances, textile designs, and many other types of goods. Industrial design rights cover those elements of a product that are aesthetic or ornamental – the way it looks and feels. Industrial design designs9 What designs can be protected? Industrial design law only protects those aspects of a product that are ornamental; its technical features may be protected by patent, if they meet the requirements for patent protection. A design may consist of three-dimensional features, such as the shape or surface of an article, or twodimensional features such as patterns, lines or color. To qualify for protection as an industrial design under most national laws, the design must be new and show a degree of originality or individuality, meaning that it is not identical or very similar to any previous design. Moreover, it must be capable of being produced industrially, so unique artworks are not covered. designs Industrial 10 Industrial design rights Industrial design rights entitle the right holder to control the commercial production, importation and sale of products with the protected design. As with most other forms of IP, owners can exploit design rights themselves, or license or sell them to others, and can sue in the relevant national court to prevent infringem™ent of their rights. This means that owners have a fair chance to recoup their investment in design, encouraging such investment. Industrial design rights last for a limited period. This varies among countries, but the maximum period of protection in a country will be at least ten years. In many countries, owners need to renew their registration every few years if they want to keep the design protected for the maximum possible period. Different national design laws Industrial designs are protected in different ways in different countries. In most cases, a firm or designer will need to register their design in order to protect it, but some countries also give limited protection to unregistered designs, and in some countries protection is by means of “design patents”. In certain countries, some industrial designs may be regarded as artistic works covered by copyright. This can be advantageous to the right holder because the term of protection for copyright is much longer than for a registered design. In some countries it may also be possible to protect designs using national laws against unfair competition. designs Industrial 11 Obtaining protection Industrial design rights are territorial, so designers or firms may need to deal with many different national systems if they want protection in many countries. However, regional systems exist for some groups of countries. WIPO administers the Hague System. Under the Hague Agreement Concerning the International Registration of Industrial Designs, applicants can file a single international application covering up to 100 designs in as many signatory states as they choose. Trademarks 12 Trademarks Trademarks have been around for many years. In ancient times, artisans would sign or mark their work to prove they had made it. Gradually, laws evolved to protect such marks. These days, trademarks are essential to business. They take many forms and identify a huge array of goods and services. Enterprises spend enormous amounts of time and money developing their brands and trademarks. Legal protection allows the owner of a mark to control who uses it. This means that enterprises can develop and promote their goods and services without having their reputation undermined by counterfeiters, and consumers can rely on trademarks being genuine. A trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises. Trademarks 13 Different types of trademark All sorts of signs may be used as trademarks – words, letters, numbers, symbols, colors, pictures, three-dimensional signs such as shapes and packaging, holograms, sounds, even tastes and smells. To be eligible for registration, the basic principle is that a trademark must be distinctive, so it cannot just be a generic description of the product or service. Nor can it be identical (or very similar) to a trademark already registered or used for that type of product or service. Trademarks are not just used to identify the goods and services of a particular enterprise. There are also collective marks, each owned by an association and used by its members. For example, professional associations of accountants, engineers and architects often use this kind of mark. And there are certification marks which show that a product or service complies with certain standards, such as Ecolabels for products with reduced environmental impacts. Trademarks 14 Protecting trademarks The best way of protecting a trademark is to register it. Owners of a registered mark have the exclusive right to control who uses it: they can use it to identify their own goods or services, or license or sell it for someone else to use. To register a mark in a territory, the applicant needs to submit a reproduction of it to the trademark office plus a full list of the goods or services to which it would apply. As well as being sufficiently distinctive and not conflicting with any existing mark, the mark must not be misleading or deceptive or violate public order or morality. Once a trademark has been granted, the owner can sue in the relevant national court if it is infringed by someone else. Equally, a trademark owner could face a legal challenge from a third party arguing that it is too similar to their own mark. A trademark will only be granted for a limited period – in most countries, ten years – but the mark can be renewed as many times as the owner wishes on payment of additional fees, provided it is still being used, so in practice a trademark can be protected indefinitely. Trademarks15 National, regional and international protection Like most IP law, trademark protection is territorial. However, regional and international systems have developed to make it easier to obtain trademark protection in many countries. WIPO offers international registration under the Madrid System. By filing a single application, users can obtain trademark protection in as many of the countries that have joined the System as they wish. There are also online tools that allow users to search trademark registers and help them manage renewal of their marks in different territories. Geo graphical 16 Geographical indications A geographical indication is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. There are lots of examples of geographical indications – often food and drink, such as Roquefort cheese from France, Darjeeling tea from India and Tequila liquor from Mexico. Consumers buying products with geographical indications want to know that the goods do indeed come from the place in question and conform to relevant standards, so there need to be some controls on the use of geographical indications to protect their valuable reputation. There are different laws protecting geographical indications and different systems of recognition in different countries, so international law is developing ways to strengthen protection across national boundaries. Geo graphical indica tions 17 Different types of geographical indication In order to function as a geographical indication, a sign must identify a product as originating in a given place, and the qualities, characteristics or reputation of the product should be essentially due to that place of origin. This is often the case for agricultural products, because they are influenced by their local climate and environment, but geographical indications may also be used for industrial products where a region has a strong manufacturing tradition and reputation, for instance Swiss watches. Appellations of origin are a type of geographical indication. In some jurisdictions, appellations of origin are protected more strongly than other geographical indications. Geo graphical Protecting geographical indications There are three main ways to protect a geographical indication: • through special on geographical indications laws – so-called sui generis systems; • using collective or certification marks; and • methods focusing on business practices, including administrative product approval schemes. Countries often use more than one of these different approaches, and different approaches may involve differences with respect to important questions, such as the conditions for protection or the scope of protection. However, sui generis systems and collective or certification mark systems are similar in that both set up rights for collective use by those who comply with defined standards. Essentially, such rights allow legitimate producers – those whose products come from the area in question and meet all relevant standards – to use the law to stop a geographical indication being used on goods produced elsewhere, or to a different standard. 18 Geographical indications and trademarks In some respects, geographical indication rights are similar to trademarks. Right holders can prevent infringing use of the geographical indication, and potentially the right lasts forever – although periodic re-registration of collective or certification marks may be required. However, there are also important differences between these two types of sign. A trademark is used by a company to distinguish its goods and services from those produced by others, and the owner can prevent anyone else from using the mark. Furthermore, a trademark can be sold or licensed. Geo graphical indica tions 19 International protection As with other types of IP, international law has developed to complement and reinforce the protection offered in different national and regional jurisdictions. International recognition of appellations of origin and “indications of source” dates back to the Paris Convention of 1883. More recently, the agreement on Trade-Related Aspects of Intellectual Property (TRIPS) included some further provisions to prevent the misuse of GIs. In addition, WIPO administers the international Lisbon System. This used to apply only to appellations of origin, but the Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications, adopted in 2015, extended the System to make it possible to register other geographical indications internationally too. A geographical indication guarantees to consumers that a product was produced in a certain place and has certain characteristics that are due to that place of production. It may be used by all producers in the relevant place who make products that share certain qualities relating to that place, and it cannot change ownership. Copyright 20 Copyright covers an enormous range of works – not just books, music, paintings, sculpture and films, but also computer programs, databases, advertisements, maps and technical drawings, among other things. There are also rights related to the copyright of the creators that protect the interests of those closely associated with copyrighted works, including performers, broadcasters and producers of sound recordings. Copyright is protected by a mixture of national and international laws. These recognize the cultural and social importance of creative endeavor as well as its considerable economic value. The underlying aim of copyright law is to strike the right balance between the interests of content creators, developers and investors and the public interest in being able to access and use creative content. Copyright and related rights Copyright, or authors’ right, is a legal term used to describe the rights that creators have in their literary, artistic and scientific works. and related rights 21 What works does copyright cover? Copyright applies to the creative expression of ideas in many different forms – text, still or moving pictures, sound works, three-dimensional shapes such as sculptures and architecture, reference works and collections of data. National copyright laws rarely provide an exhaustive list of everything that is covered. However, copyright does not generally cover ideas themselves, procedures, methods of operation, or mathematical concepts. Copyright 22 What rights does copyright provide? Copyright includes both economic and moral rights. Essentially, economic rights involve the right to control the distribution of a work. In other words, a copyright owner can stop anyone from copying or using a work without permission – including, for example, by translating it, reproducing it, performing it or broadcasting it. Exactly how the owner enforces these rights will depend on the national laws of the country concerned, but countries often provide a mixture of civil and criminal penalties for copyright infringement. Copyright also includes certain moral rights of the creator – including, among others, the right to be acknowledged as the author of a work and to prevent it from being altered in a way that might damage the creator’s reputation. Transferring and trading copyright Generally, economic rights can be transferred and divided. A right owner may agree to let someone use a work under certain conditions (licensing), or they may give or sell the rights to someone who then becomes the new owner (assignment). And if a copyright owner dies, their heirs or successors will inherit their economic rights. It is very common for rights to be transferred. For example: • Book authors, music composers and recording artists often license or assign rights to publishers in exchange for payments known as royalties. • In many countries, creators can license or assign their rights to collective management organizations which will monitor how works are used and collect payments from users on the creator’s behalf. • Copyright owners may choose to give away their work for free, or to let other people use it freely based on certain conditions. For example, they may allow use based on standard Creative Commons licenses. and related rights 23 In many countries, moral rights cannot be traded or transferred, but a creator may sometimes agree to waive or refrain from exercising them. Copyright and the public interest Copyright serves the public interest by helping to ensure that creators can earn a fair reward for their work, thus encouraging further creative endeavor, and by making sure that works are properly acknowledged and respected. The law also recognizes that in certain circumstances, known as copyright limitations and exceptions, copyright restrictions should not apply. For example, many countries allow for copyrighted books to be adapted without the rights owner’s permission to create versions that are accessible to people with visual impairment or other physical disabilities that make it difficult for them to use ordinary printed copies. There is now support for this exception under international law through the Marrakesh Treaty of 2013, administered by WIPO, which also provides for the crossborder exchange of accessible books. Furthermore, the economic rights within copyright only last for a limited period, the so-called term of copyright. Once this term has expired, a work enters the public domain, meaning it is free for anyone to use. Moral rights are term-limited in some countries and perpetual in others. National and international copyright law There are different national laws on copyright in different territories, as with other forms of intellectual property. However, international law establishes certain minimum standards of protection: • Copyright arises as soon as a work is created. There is no need for a creator to register a work or complete any other formalities in order to gain protection (though some countries do operate voluntary copyright registration schemes). • Countries are required to protect most copyrighted works throughout the life of the creator and for at least 50 years after the creator’s death. Copyright and related rights 24 • International law means that copyrighted works are generally protected in most countries, not just the country in which they were created. These minimum standards are guaranteed by a series of international treaties administered by WIPO. States that have joined these treaties can provide more than the minimum protection – for example, a longer copyright term – but they cannot provide less. Related rights The law also protects the rights of certain people or groups who are involved in creative work but do not qualify for copyright protection in many jurisdictions, including performers such as singers and actors, broadcasting organizations, and organizations such as record companies that produce sound recordings. These are known as related rights or neighboring rights, because they are related to copyright. The protection offered is similar to copyright. Generally, right owners can stop people from recording, communicating or broadcasting their work without their permission. However, the term of protection is usually shorter than copyright; in most countries, it lasts for 50 years from the date of the performance, recording or broadcast. New challenges Copyright law has to evolve to deal with new technologies and cultural practices. For example, digital technologies make it possible to make and transmit near-perfect copies of works at little cost. In 1996, two new international agreements, the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), were concluded in order to help protect copyright and related rights in the Internet age. And in 2012 the Beijing Treaty on Audiovisual Performances was adopted to protect the related rights of audiovisual performers. But other challenges remain. How can the traditional cultural expressions of people in developing countries best be protected in a globalizing economy? Is 3D printing adequately covered by copyright law? What is the best way of ensuring that musicians and artists receive proper payment when their works can be accessed online anywhere in the world? WIPO helps countries develop common responses to the evolving challenges. The World Intellectual Property Organization WIPO is the global forum for intellectual property services, policy, information and cooperation. It was founded in 1967 and became a specialized agency of the United Nations in 1974. There are four main elements of WIPO’s work. Shaping international rules WIPO helps to develop and implement international law on intellectual property. As we have seen, most IP law is limited to a particular national jurisdiction. International law is crucial to facilitate protection across national boundaries. There are now more than 25 international IP treaties administered by WIPO, and negotiations are ongoing to deal with new challenges. WIPO provides a neutral environment in which different countries can come together to negotiate new rules, striking a fair balance between different interests. Delivering global services WIPO delivers international filing and registration services. We have mentioned many examples in this booklet: international patent filing under the PCT System, international trademark registration under the Madrid System, industrial design registration under the Hague System and registration of geographical indications under the Lisbon System. WIPO also provides arbitration and mediation services to help resolve IP disputes. WIPO charges fees for these services. In fact, it earns more than 90% of its income through such fees. This is unusual for an international organization. Most international organizations are funded by their member states – in other words, by those countries’ taxpayers – whereas most of WIPO’s budget is paid for by the people and businesses who use its services. Cooperating with countries and partners to make IP work for development An important part of WIPO’s mission is to help all countries use and benefit from IP laws and protection systems. Many of WIPO’s member states already have very sophisticated and longstanding national IP systems, but some developing countries are working to build this capacity. Providing information and shared infrastructure WIPO aims to be a comprehensive and impartial source of information on global IP issues. This booklet is just one of many WIPO publications – there are also books, magazines, economic studies, statistics and many other reference works. WIPO has also developed infrastructure for accessing and sharing knowledge, including enormous databases of patents, brands, trademarks, appellations of origin and IP legislation. Visit the WIPO website to access a wealth of information: www.wipo.int. World Intellectual Property Organization 34, chemin des Colombettes P.O. Box 18 CH-1211 Geneva 20 Switzerland Tel: +41 22 338 91 11 Fax: +41 22 733 54 28 For contact details of WIPO’s External Offices visit: www.wipo.int/about-wipo/en/offices © WIPO, 2020 First published 2004 Attribution 3.0 IGO (CC BY 3.0 IGO) The CC license does not apply to non-WIPO content in this publication. Photos: Getty Images WIPO Publication No. 450E/20 ISBN 978-92-805-3176-3

### 1NC – Impacts

#### Vote negative for predictable limits and ground—-allowing the affirmative to pick any grounds for the debate makes negative engagement impossible, by skirting a predictable starting point and making our preparation and research useless. Because debate is a competitive game, there is an incentive to revert to truisms that give the negative no chance at engagement. The lack of a plan also means the affirmative can shift their advocacy in later speeches instead of being tied to a particular text, which obviates negative arguments.

#### This has two impacts –

#### Fairness – A predictable limit is the only way to give the neg a chance to win—-radical aff choice shifts the grounds for the debate and puts the aff far ahead. Pre-tournament negative preparation is structured around topical plans as points of offense, which means anything other than a topical plan structurally favors the affirmative. Fairness is an intrinsic good—-debate is fundamentally a game and requires effective competition between the aff and the neg—-the only way for any benefit to be produced from debate and the reason why people are incentivized to do prep and research is to help them do better in their next round is if the judge can make a decision between two sides who have had a relatively equal chance to prepare for a common point of debate. Fairness also comes before substance—-deciding any other argument in this debate cannot be disentangled from our inability to prepare for it—-any argument you think they’re winning is a link, not a reason to vote for them, because it’s just as likely that they’re winning it because we weren’t able to effectively prepare to defeat it.

#### Second is Argument Engagement---advocacy tied to the resolution incentivizes nuanced research and CLASH with a well prepared opponent---They turn debate into one with no negative counterargumentation which causes confirmation bias and less good affirmatives. It also doesn’t subject the aff to rigorous arugmentation which eliminates the skills necessary to make real material change in the world and doesn’t generate real productive discussions – turns their offense.

#### Topical version of the aff – critique the use of trade secrets to block access to clinical trial data that would reveal racial patient discrepancies – free COVID vaccines for Africa through eliminating IP for only those countries – big pharma biocolonialism – etc – use sufficiency when evaluating the TVA because all deficits are neg ground. This and reading it on the neg solve their offense by re-centering debate on abjection.

#### Topicality must be a voting issue—the role of the ballot is to vote for whoever does the better debating over the resolutional question. Any aff role for debate must explain why we switch sides and why there has to be a winner and a loser—switching sides within the competitive yet limited bounds of the topic performs the labor of the negative which avoids group polarization and untested advocacy

#### Theory is an issue of competing interpretations because reasonability invites arbitrary judge intervention based on preference rather than argumentation and encourages a race to the bottom in which debaters will exploit a judge’s tolerance for questionable argumentation.

## OFF

### DA – Innovation

#### Pharmaceutical innovation is accelerating now – new medicines are substantially better than existing treatments.

Wills, MBA, and Lipkus, PhD, 20 – Todd J. Wills [Managing Director @ Chemical Abstracts Service, MBA from THE Ohio State University] and Alan H. Lipkus [Senior Data Analyst @ Chemical Abstracts Service, PhD Physical Chemistry from the University of Rochester], “Structural Approach to Assessing the Innovativeness of New Drugs Finds Accelerating Rate of Innovation,” ACS Medicinal Chemistry Letters, Vol. 11, 2020, <https://pubs.acs.org/doi/pdf/10.1021/acsmedchemlett.0c00319> C.VC

Despite recent concerns over an innovation crisis, this analysis shows pharmaceutical innovation has actually increased over the last several decades based on the structural novelty of approved NMEs. The higher proportion of Pioneers over the most recent decade is a sign that innovation within the industry is accelerating rather than slowing. It is also an encouraging sign for the state of innovation in drug discovery that these Pioneers are significantly more likely to be the source of promising new therapies that are expected to provide substantial clinical advantages over existing treatments. Drug hunters are discovering Pioneers in newer and less explored regions of chemical space as they are increasingly found on scaffolds first reported in the CAS REGISTRY five or less years prior to their IND year or on scaffolds populated with 50 or less other compounds at the time of IND.

As scale becomes less of a strategic advantage, Big Pharma’s share of Pioneers has decreased even though the number of Big Pharma originated Pioneers has increased. This has created a structural innovation gap between Big Pharma and the Rest of Ecosystem which has widened over the last two decades as the Rest of Ecosystem is now responsible for originating almost 3 out of every 4 Pioneers. Pioneers originated by the Rest of Ecosystem are increasingly on new scaffolds, while a majority of Big Pharma originated Pioneers have historically been on new scaffolds.

The work presented here was intended as a study of drug innovation at a macro level. As a result, it included substances of various sizes with different degrees of complexity belonging to a range of functional and drug classes. Even though it was outside the scope of the present work to study specific subsets, such focused studies could yield additional insights into how innovation at a more micro level has changed over time. Other interesting subsets of our data set are the shapes and scaffolds of the Settlers and Colonists. Many of these shapes and scaffolds are privileged in the sense that they are seemingly capable of serving as ligands for a diverse array of target proteins. A separate study of the Settlers and Colonists as well as their side chains could provide insights into possible target-specific innovation trends.

As it often takes more than 10 years after initial discovery for an experimental drug to gain FDA approval, any measure of drug innovation that relies on the time of approval incorporates a significant time lag between initial discovery and ultimate approval. However, characterizing drug innovation based on structural novelty provides a means to assess the forward-looking innovation potential of an experimental drug at the time of initial discovery by comparing its framework information (at the scaffold and shape level) with prior FDA-approved drugs. Therefore, a separate study of drug candidates with publically disclosed structures currently in clinical development could provide additional insights into innovation trends at an FDA regulatory review level and serve as a leading indicator of innovation trends at an FDA approval level.

Given the tremendous opportunity represented by the vast amount of chemical space yet to be explored, drug-hunters of all types will continue pushing the boundaries to find promising new therapies in previously unexplored areas of chemical space. The race to discover these new drugs will be fueled by further advancements in screening approaches and in-silico methods (including innovations related to machine learning algorithms and molecular representations). However, comprehensive data on known shapes and scaffolds can fast track the identification of meaningful open areas of chemical space (shapes or scaffolds that are potentially important but have never been used as the basis for a molecule) to further explore.

#### The biopharmaceutical industry is uniquely reliant on IP protections – undermining them would kill innovation by making an already expensive process completely unfeasible.

Kristina M. Lybecker, PhD, 17 [PhD Economics, Associate Professor of Economics @ Colorado College], “Intellectual Property Rights Protection and the Biopharmaceutical Industry: How Canada Measures Up,” Fraser Institute, January 2017, <https://www.fraserinstitute.org/sites/default/files/intellectual-property-rights-protection-and-the%20biopharmaceutical-industry.pdf> C.VC

The unique structure of the innovative biopharmaceutical industry necessitates a variety of intellectual property protection mechanisms. In particular, the industry is characterized by a research and development (R&D) process that is lengthy, expensive, uncertain, and risky. According to DiMasi and colleagues, the estimated cost of developing a new medicine is US$2.6 billion (DiMasi, Grabowski, and Hansen, 2016).2 In addition, the time required to develop a new drug is also significant, averaging 10 to 15 years without any guarantee of success (PhRMA, n.d.). While these figures are highly controversial, biopharmaceutical innovation is unquestionably an expensive and lengthy undertaking.3 For the biopharmaceutical industry, innovation and its protection are essential and the source of both profits and growth. As such, patent protection is disproportionally more important for ensuring that the innovator appropriates the returns to R&D for the biopharmaceutical industry than virtually any other. Extending the findings of the 1987 “Yale Survey” (Levin, Klevorick, Nelson, and Winter, 1987), the “Carnegie Mellon Survey” established that while patents are again considered “unambiguously the least effective appropriability mechanisms,” the drug industry and other scholars regard them as strictly more effective than alternative mechanisms (Cohen, Nelson, and Walsh, 1996). The industry’s disproportionate reliance on patents and other forms of intellectual property protection is confirmed in numerous other studies.4

In essence, IPR protections provide innovative biopharmaceutical firms with an assurance of some return on their investment, thus creating incentives for the development of new technologies that could otherwise be easily replicated and sold by competitors. Due to the tremendous fixed costs required to develop new treatments and cures, a significant potential exists for free riding by follower firms, a market failure that would prevent investment in innovation were it not for the patents and other forms of intellectual property protections that provide a limited period of market exclusivity or other such incentives. Fundamentally, patents amount to an efficiency tradeoff. Society provides innovators with a limited period of market exclusivity to encourage innovation in exchange for public access to this knowledge. In exchange for the temporary static loss from market exclusivity, society gains complete knowledge of the innovation through disclosure, a permanent dynamic gain. Through this tradeoff, the existing patent system corrects the market failure that would stymie innovation. In its Apotex Inc. v. Wellcome Foundation Ltd. finding, Justice Binnie wrote for the Supreme Court of Canada, “A patent, as has been said many times, is not intended as an accolade or civic award for ingenuity. It is a method by which inventive solutions to practical problems are coaxed into the public domain by the promise of a limited monopoly for a limited time. Disclosure is the quid pro quo for valuable proprietary rights to exclusivity which are entirely the statutory creature of the Patent Act” (para. 37).

The biopharmaceutical industry is characterized by a number of legal and economic issues that distinguish it from other research-intensive industries. Danzon (1999) describes three features that are particularly noteworthy. First, given that the biopharmaceutical industry is characterized by an unusually high rate of R&D, intellectual property protection provides for the potential for significant market power and monopoly pricing that raises numerous public health policy questions surrounding prices and profits. Second, virtually every aspect of the industry is heavily regulated, from safety and efficacy to promotion and advertising, to pricing and reimbursement. Danzon describes the impact of these regulations as “profound and multidimensional even within a single country, affecting consumption patterns, productivity, R&D and hence the supply of future technologies” (Danzon, 1999: 1056). Lastly, while research and development costs are borne solely by the innovator, the resulting product is a global public good. “Each country faces an incentive to adopt the regulatory policies that best control its pharmaceutical budget in the short run, free-riding on others to pay for the joint costs of R&D and ignoring cross-national spillovers of national regulatory policies through parallel trade and international price comparisons” (Danzon, 1999: 1056). The combination of these characteristics defines a set of unique economic and legal challenges for the innovation of new drugs and the public health policies that surround their production, marketing, and distribution.

Innovative companies make far greater investments in time, resources, and financial support than do generic firms. Notably, innovation-based companies spend more than 200 times that which generic companies spend on the development of a particular drug (CIPC, 2011: 10). In addition, the investment of time, from laboratory to market, is also close to double for innovative companies relative to generic producers. Table 1 highlights the differences in the drug development processes of innovative and generic companies. For innovative biopharmaceutical companies, the development process is expensive, risky, and time consuming, all of which points to the need for strong IP protection to encourage investment and ensure companies are able to recover their investments.

The risk involved in biopharmaceutical development is starkly illustrated in a recent report by Biotechnology Innovation Organization (BIO), which reports that less than one of every 10 drugs that enter clinical trials is ultimately approved by the Food and Drug Administration in the United States. The report finds a success rate of merely 9.6%, a calculation that is significantly smaller than the widely-cited 11.8% figure from a 2014 study by the Tufts University’s Center for the Study of Drug Development.5 The International Federation of Pharmaceutical Manufacturers and Associations (2012) estimates that more than 3,200 compounds were at different stages of development globally in 2011, but only 35 new medicines were launched (Dawson, 2015).

Fundamentally, research-based biopharmaceutical companies incur greater expenses and risk in the development of their products than do generic manufactures. These investments of time and financial resources should be recognized and the effective patent life should be sufficient to recoup these investments. Continued investment and innovation are contingent upon strong, effective intellectual property protection and the ability of innovative firms to recoup their investments. Patents and other forms of intellectual property protection are disproportionally important to the research-based biopharmaceutical industry. Consequently, the legal architecture necessary to foster a robust innovation-based industry is multifaceted and is a powerful force shaping the biopharmaceutical industry, its profitability, productivity, and innovative future.

**Pharmaceutical innovation is key to protecting against future pandemics, bioterrorism, and antibiotic resistance.**

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As key actors in the healthcare innovation landscape, pharmaceutical and life sci-ences 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 con-text**.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 compe-tition 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 pharmaceu-tical 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 sec-tor.2 It is therefore unsurprising that we are seeing indus-try-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 com-pounds to assess their utility in the fight against COVID-19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating tri-als 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 accel-erate 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 rela-tively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pres-sure 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 com-bination product that is being tested for therapeutic poten-tial 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**, **bioterror-ism** 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 imme-diate term. The pharmaceutical industry has responded to previous public health emergencies associated with infec-tious 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 contribu-tions 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 innova-tion conditions.

#### Bioterrorism and future pandemics cause extinction.

Hamish De Bretton-Gordon, CBRN Expert @ British Army, 20 [Director @ DBG Defense, Consultant on CBRN and Biosecurity], “Biosecurity in the Wake of COVID-19: The Urgent Action Needed,” Combatting Terrorism Center Sentinel, November/December 2020, Volume 13, Issue 11, <https://ctc.usma.edu/biosecurity-in-the-wake-of-covid-19-the-urgent-action-needed/> C.VC

Policymakers around the world did not grasp just how large the impact of a bio threat could be. Beyond the enormous human and economic impact, the current pandemic has exposed the weakness, lack of preparedness, and poor responsiveness of healthcare systems of even highly developed countries like the United States and the United Kingdom. And the virus has inflicted carnage, even though SARS-CoV-2 (the virus that causes COVID-19) is not especially virulent. The world may be confronted with other viruses in the future whose combination of virulence (the harm a pathogen does to its host), transmissibility, and other characteristics pose much greater danger.

While overwhelming evidence points to SARS-CoV-2 spontaneously spreading to humans, the advances in synthetic biology and the growth in the number of Level 3 and 4 biocontainment facilities around the world storing deadly viruses1 mean there is also the very real possibility that in the future, bad actors will try to engineer or steal/obtain a highly transmissible and highly virulent virus and unleash it onto the world. Another risk is accidental releases from such biocontainment facilities.

COVID-19, a highly transmissible but not very virulent pathogen, has had a devastating global impact, a fact that will not have gone unnoticed by rogue states and terror organizations. Advances in synthetic biology have created tools that could be put to malevolent use. In the last two decades, scientists synthesized the poliovirus from its genetic sequence,2 recreated the 1918 Spanish flu virus,3 and succeeded in modifying the H5N1 avian flu virus so that it resulted (in a research laboratory) in airborne transmission among mammals.4 In the future, we should think of weaponized biology as no less of an existential threat to the planet than weaponized atomic science. It should also be noted that the fear and panic that even a medium-scale bioterror attack could create could have dangerous implications that may rival or even surpass the immediate loss of life.

The Need to Rethink Likelihood

Given the fact that in late 2019 when, as far as is known, COVID-19 cases first started emerging in China, it had been more than a century since the previous catastrophic outbreak (the 1918-1919 “Spanish flu” pandemic),d it was unsurprising that many thought of such pandemics as a one-in-a-100-year event. Such assumptions should no longer hold. The encroachment of human settlements into areas that had previously been sanctuaries for wildlife5 and the popularity in some parts of the world of markets where people and wild animals are brought into proximity have made it more likely viruses will make the species leap to human beings.e And when they do, as the COVID-19 pandemic illustrated, the interconnectedness of a world in which millions of people fly each day6 means they can spread very rapidly.

There is also growing concern about engineered viruses. Not only have advances in synthetic biology (SynBio) created growing capacity for extremely dangerous viruses to be engineered in a laboratory, but the number of people with access to potentially dangerous ‘dual use’ technology has greatly expanded and continues to expand, making malevolent use of such technology ever more likely.

In the August 2020 issue of this publication, scientists at the U.S. Military Academy at West Point warned that:

The wide availability of the protocols, procedures, and techniques necessary to produce and modify living organisms combined with an exponential increase in the availability of genetic data is leading to a revolution in science affecting the threat landscape that can be rivaled only by the development of the atomic bomb. As the technology improves, the level of education and skills necessary to engineer biological agents decreases. Whereas only state actors historically had the resources to develop and employ biological weapons, SynBio is changing the threat paradigm.

The cost threshold of engineering viruses is also lowering, with the West Point scientists warning that synthetic biology has “placed the ability to recreate some of the deadliest infectious diseases known well within the grasp of the state-sponsored terrorist and the talented non-state actor.”7

As already noted, another source of vulnerability is that deadly viruses could be stolen from or escape from a research laboratory. There are now around 50 Biosafety Level 4f facilities around the world, where the deadliest pathogens are stored and worked on, and this figure is set to increase in the next few years.g This is a large increase over the last 30 years, creating bigger risk of a breach. Of equal, if not greater concern are the thousands of Biosafety Level 3 labs globally,8 which handle deadly pathogens like COVID-19.9

Given what has been outlined above, the risk of a future destructive biological attack or another devastating global pandemic should no longer be seen as low. From this point forward, there should no higher priority for the international community than biosecurity.

## Case

### 1NC – Extinction Outweighs

#### Extinction outweighs---it’s the upmost moral evil and disavowal of the risk makes it more likely.

Burns 2017 (Elizabeth Finneron-Burns is a Teaching Fellow at the University of Warwick and an Affiliated Researcher at the Institute for Futures Studies in Stockholm, What’s wrong with human extinction?, <http://www.tandfonline.com/doi/pdf/10.1080/00455091.2016.1278150?needAccess=true>, Canadian Journal of Philosophy, 2017)

Many, though certainly not all, people might believe that it would be wrong to bring about the end of the human species, and the reasons given for this belief are various. I begin by considering four reasons that could be given against the moral permissibility of human extinction. I will argue that only those reasons that impact the people who exist at the time that the extinction or the knowledge of the upcoming extinction occurs, can explain its wrongness. I use this conclusion to then consider in which cases human extinction would be morally permissible or impermissible, arguing that there is only a small class of cases in which it would not be wrong to cause the extinction of the human race or allow it to happen. 2.1. It would prevent the existence of very many happy people One reason of human extinction might be considered to be wrong lies in the value of human life itself. The thought here might be that it is a good thing for people to exist and enjoy happy lives and extinction would deprive more people of enjoying this good. The ‘good’ in this case could be understood in at least two ways . According to the first, one might believe that you benefit a person by bringing them into existence, or at least, that it is good for that person that they come to exist. The second view might hold that if humans were to go extinct, the utility foregone by the billions (or more) of people who could have lived but will now never get that opportunity, renders allowing human extinction to take place an incidence of wrongdoing. An example of this view can be found in two quotes from an Effective Altruism blog post by Peter Singer, Nick Beckstead and Matt Wage: One very bad thing about human extinction would be that billions of people would likely die painful deaths. But in our view, this is by far not the worst thing about human extinction. The worst thing about human extinction is that there would be no future generations. Since there could be so many generations in our future, the value of all those generations together greatly exceeds the value of the current generation. (Beckstead, Singer, and Wage 2013) The authors are making two claims. The first is that there is value in human life and also something valuable about creating future people which gives us a reason to do so; furthermore, it would be a very bad thing if we did not do so. The second is that, not only would it be a bad thing for there to be no future people, but it would actually be the worst thing about extinction. Since happy human lives have value, and the number of potential people who could ever exist is far greater than the number of people who exist at any one time, even if the extinction were brought about through the painful deaths of currently existing people, the former’s loss would be greater than the latter’s. Both claims are assuming that there is an intrinsic value in the existence of potential human life. The second claim makes the further assumption that the forgone value of the potential lives that could be lived is greater than the disvalue that would be accrued by people existing at the time of the extinction through suffering from painful and/or premature deaths. The best-known author of the post, Peter Singer is a prominent utilitarian, so it is not surprising that he would lament the potential lack of future human lives per se. However, it is not just utilitarians who share this view, even if implicitly. Indeed, other philosophers also seem to imply that they share the intuition that there is just something wrong with causing or failing to prevent the extinction of the human species such that we prevent more ‘people’ from having the ‘opportunity to exist’. Stephen Gardiner (2009) and Martin O’Neill (personal correspondence), both sympathetic to contract theory, for example, also find it intuitive that we should want more generations to have the opportunity to exist, assuming that they have worth-living lives, and I find it plausible to think that many other people (philosophers and non-philosophers alike) probably share this intuition. When we talk about future lives being ‘prevented’, we are saying that a possible person or a set of possible people who could potentially have existed will now never actually come to exist. To say that it is wrong to prevent people from existing could either mean that a possible person could reasonably reject a principle that permitted us not to create them, or that the foregone value of their lives provides a reason for rejecting any principle that permits extinction. To make the first claim we would have to argue that a possible person could reasonably reject any principle that prevented their existence on the grounds that it prevented them in particular from existing. However, this is implausible for two reasons. First, we can only wrong someone who did, does or will actually exist because wronging involves failing to take a person’s interests into account. When considering the permissibility of a principle allowing us not to create Person X, we cannot take X’s interest in being created into account because X will not exist if we follow the principle. By considering the standpoint of a person in our deliberations we consider the burdens they will have to bear as a result of the principle. In this case, there is no one who will bear any burdens since if the principle is followed (that is, if we do not create X), X will not exist to bear any burdens. So, only people who do/will actually exist can bear the brunt of a principle, and therefore occupy a standpoint that is owed justification. Second, existence is not an interest at all and a possible person is not disadvantaged by not being caused to exist. Rather than being an interest, it is a necessary requirement in order to have interests. Rivka Weinberg describes it as ‘neutral’ because causing a person to exist is to create a subject who can have interests; existence is not an interest itself.3 In order to be disadvantaged, there must be some detrimental effect on your interests. However, without existence, a person does not have any interests so they cannot be disadvantaged by being kept out of existence. But, as Weinberg points out, ‘never having interests itself could not be contrary to people’s interests since without interest bearers, there can be no ‘they’ for it to be bad for’ (Weinberg 2008, 13). So, a principle that results in some possible people never becoming actual does not impose any costs on those ‘people’ because nobody is disadvantaged by not coming into existence.4 It therefore seems that it cannot be wrong to fail to bring particular people into existence. This would mean that no one acts wrongly when they fail to create another person. Writ large, it would also not be wrong if everybody decided to exercise their prerogative not to create new people and potentially, by consequence, allow human extinction. One might respond here by saying that although it may be permissible for one person to fail to create a new person, it is not permissible if everyone chooses to do so because human lives have value and allowing human extinction would be to forgo a huge amount of value in the world. This takes us to the second way of understanding the potential wrongness of preventing people from existing — the foregone value of a life provides a reason for rejecting any principle that prevents it. One possible reply to this claim turns on the fact that many philosophers acknowledge that the only, or at least the best, way to think about the value of (individual or groups of) possible people’s lives is in impersonal terms (Parfit 1984; Reiman 2007; McMahan 2009). Jeff McMahan, for example, writes ‘at the time of one’s choice there is no one who exists or will exist independently of that choice for whose sake one could be acting in causing him or her to exist … it seems therefore that any reason to cause or not to cause an individual to exist … is best considered an impersonal rather than individual-affecting reason’ (McMahan 2009, 52). Another reply along similar lines would be to appeal to the value that is lost or at least foregone when we fail to bring into existence a next (or several next) generations of people with worth-living lives. Since ex hypothesi worth-living lives have positive value, it is better to create more such lives and worse to create fewer. Human extinction by definition is the creation of no future lives and would ‘deprive’ billions of ‘people’ of the opportunity to live worth-living lives. This might reduce the amount of value in the world at the time of the extinction (by killing already existing people), but it would also prevent a much vaster amount of value in the future (by failing to create more people). Both replies depend on the impersonal value of human life. However, recall that in contractualism impersonal values are not on their own grounds for reasonably rejecting principles. Scanlon himself says that although we have a strong reason not to destroy existing human lives, this reason ‘does not flow from the thought that it is a good thing for there to be more human life rather than less’ (104). In contractualism, something cannot be wrong unless there is an impact on a person. Thus, neither the impersonal value of creating a particular person nor the impersonal value of human life writ large could on its own provide a reason for rejecting a principle permitting human extinction. It seems therefore that the fact that extinction would deprive future people of the opportunity to live worth-living lives (either by failing to create either particular future people or future people in general) cannot provide us with a reason to consider human extinction to be wrong. Although the lost value of these ‘lives’ itself cannot be the reason explaining the wrongness of extinction, it is possible the knowledge of this loss might create a personal reason for some existing people. I will consider this possibility later on in section (d). But first I move to the second reason human extinction might be wrong per se. 2.2. It would mean the loss of the only known form of intelligent life and all civilization and intellectual progress would be lost A second reason we might think it would be wrong to cause human extinction is the loss that would occur of the only (known) form of rational life and the knowledge and civilization that that form of life has created. One thought here could be that just as some might consider it wrong to destroy an individual human heritage monument like the Sphinx, it would also be wrong if the advances made by humans over the past few millennia were lost or prevented from progressing. A related argument is made by those who feel that there is something special about humans’ capacity for rationality which is valuable in itself. Since humans are the only intelligent life that we know of, it would be a loss, in itself, to the world for that to end. I admit that I struggle to fully appreciate this thought. It seems to me that Henry Sidgwick was correct in thinking that these things are only important insofar as they are important to humans (Sidgwick 1874, I.IX.4).5 If there is no form of intelligent life in the future, who would there be to lament its loss since intelligent life is the only form of life capable of appreciating intelligence? Similarly, if there is no one with the rational capacity to appreciate historic monuments and civil progress, who would there be to be negatively affected or even notice the loss?6 However, even if there is nothing special about human rationality, just as some people try to prevent the extinction of nonhuman animal species, we might think that we ought also to prevent human extinction for the sake of biodiversity. The thought in this, as well as the earlier examples, must be that it would somehow be bad for the world if there were no more humans even though there would be no one for whom it is bad. This may be so but the only way to understand this reason is impersonally. Since we are concerned with wrongness rather than badness, we must ask whether something that impacts no one’s well-being, status or claims can be wrong. As we saw earlier, in the contractualist framework reasons must be personal rather than impersonal in order to provide grounds for reasonable rejection (Scanlon 1998, 218–223). Since the loss of civilization, intelligent life or biodiversity are per se impersonal reasons, there is no standpoint from which these reasons could be used to reasonably reject a principle that permitted extinction. Therefore, causing human extinction on the grounds of the loss of civilization, rational life or biodiversity would not be wrong. 2.3. Existing people would endure physical pain and/or painful and/or premature deaths Thinking about the ways in which human extinction might come about brings to the fore two more reasons it might be wrong. It could, for example, occur if all humans (or at least the critical number needed to be unable to replenish the population, leading to eventual extinction) underwent a sterilization procedure. Or perhaps it could come about due to anthropogenic climate change or a massive asteroid hitting the Earth and wiping out the species in the same way it did the dinosaurs millions of years ago. Each of these scenarios would involve significant physical and/or non-physical harms to existing people and their interests. Physically, people might suffer premature and possibly also painful deaths, for example. It is not hard to imagine examples in which the process of extinction could cause premature death. A nuclear winter that killed everyone or even just every woman under the age of 50 is a clear example of such a case. Obviously, some types of premature death themselves cannot be reasons to reject a principle. Every person dies eventually, sometimes earlier than the standard expected lifespan due to accidents or causes like spontaneously occurring incurable cancers. A cause such as disease is not a moral agent and therefore it cannot be wrong if it unavoidably kills a person prematurely. Scanlon says that the fact that a principle would reduce a person’s well-being gives that person a reason to reject the principle: ‘components of well-being figure prominently as grounds for reasonable rejection’ (Scanlon 1998, 214). However, it is not settled yet whether premature death is a setback to well-being. Some philosophers hold that death is a harm to the person who dies, whilst others argue that it is not.7 I will argue, however, that regardless of who is correct in that debate, being caused to die prematurely can be reason to reject a principle when it fails to show respect to the person as a rational agent. Scanlon says that recognizing others as rational beings with interests involves seeing reason to preserve life and prevent death: ‘appreciating the value of human life is primarily a matter of seeing human lives as something to be respected, where this involves seeing reasons not to destroy them, reasons to protect them, and reasons to want them to go well’ (Scanlon 1998, 104). The ‘respect for life’ in this case is a respect for the person living, not respect for human life in the abstract. This means that we can sometimes fail to protect human life without acting wrongfully if we still respect the person living. Scanlon gives the example of a person who faces a life of unending and extreme pain such that she wishes to end it by committing suicide. Scanlon does not think that the suicidal person shows a lack of respect for her own life by seeking to end it because the person whose life it is has no reason to want it to go on. This is important to note because it emphasizes the fact that the respect for human life is person-affecting. It is not wrong to murder because of the impersonal disvalue of death in general, but because taking someone’s life without their permission shows disrespect to that person. This supports its inclusion as a reason in the contractualist formula, regardless of what side ends up winning the ‘is death a harm?’ debate because even if death turns out not to harm the person who died, ending their life without their consent shows disrespect to that person. A person who could reject a principle permitting another to cause his or her premature death presumably does not wish to die at that time, or in that manner. Thus, if they are killed without their consent, their interests have not been taken into account, and they have a reason to reject the principle that allowed their premature death.8 This is as true in the case of death due to extinction as it is for death due to murder. However, physical pain may also be caused to existing people without killing them, but still resulting in human extinction. Imagine, for example, surgically removing everyone’s reproductive organs in order to prevent the creation of any future people. Another example could be a nuclear bomb that did not kill anyone, but did painfully render them infertile through illness or injury. These would be cases in which physical pain (through surgery or bombs) was inflicted on existing people and the extinction came about as a result of the painful incident rather than through death. Furthermore, one could imagine a situation in which a bomb (for example) killed enough people to cause extinction, but some people remained alive, but in terrible pain from injuries. It seems uncontroversial that the infliction of physical pain could be a reason to reject a principle. Although Scanlon says that an impact on well-being is not the only reason to reject principles, it plays a significant role, and indeed, most principles are likely to be rejected due to a negative impact on a person’s well-being, physical or otherwise. It may be queried here whether it is actually the involuntariness of the pain that is grounds for reasonable rejection rather than the physical pain itself because not all pain that a person suffers is involuntary. One can imagine acts that can cause physical pain that are not rejectable — base jumping or life-saving or improving surgery, for example. On the other hand, pushing someone off a cliff or cutting him with a scalpel against his will are clearly rejectable acts. The difference between the two cases is that in the former, the person having the pain inflicted has consented to that pain or risk of pain. My view is that they cannot be separated in these cases and it is involuntary physical pain that is the grounds for reasonable rejection. Thus, the fact that a principle would allow unwanted physical harm gives a person who would be subjected to that harm a reason to reject the principle. Of course the mere fact that a principle causes involuntary physical harm or premature death is not sufficient to declare that the principle is rejectable — there might be countervailing reasons. In the case of extinction, what countervailing reasons might be offered in favour of the involuntary physical pain/ death-inducing harm? One such reason that might be offered is that humans are a harm to the natural environment and that the world might be a better place if there were no humans in it. It could be that humans might rightfully be considered an all-things-considered hindrance to the world rather than a benefit to it given the fact that we have been largely responsible for the extinction of many species, pollution and, most recently, climate change which have all negatively affected the natural environment in ways we are only just beginning to understand. Thus, the fact that human extinction would improve the natural environment (or at least prevent it from degrading further), is a countervailing reason in favour of extinction to be weighed against the reasons held by humans who would experience physical pain or premature death. However, the good of the environment as described above is by definition not a personal reason. Just like the loss of rational life and civilization, therefore, it cannot be a reason on its own when determining what is wrong and countervail the strong personal reasons to avoid pain/death that is held by the people who would suffer from it.9 Every person existing at the time of the extinction would have a reason to reject that principle on the grounds of the physical pain they are being forced to endure against their will that could not be countervailed by impersonal considerations such as the negative impact humans may have on the earth. Therefore, a principle that permitted extinction to be accomplished in a way that caused involuntary physical pain or premature death could quite clearly be rejectable by existing people with no relevant countervailing reasons. This means that human extinction that came about in this way would be wrong. There are of course also additional reasons they could reject a similar principle which I now turn to address in the next section. 2.4. Existing people could endure non-physical harms I said earlier than the fact in itself that there would not be any future people is an impersonal reason and can therefore not be a reason to reject a principle permitting extinction. However, this impersonal reason could give rise to a personal reason that is admissible. So, the final important reason people might think that human extinction would be wrong is that there could be various deleterious psychological effects that would be endured by existing people having the knowledge that there would be no future generations. There are two main sources of this trauma, both arising from the knowledge that there will be no more people. The first relates to individual people and the undesired negative effect on well-being that would be experienced by those who would have wanted to have children. Whilst this is by no means universal, it is fair to say that a good proportion of people feel a strong pull towards reproduction and having their lineage continue in some way. Samuel Scheffler describes the pull towards reproduction as a ‘desire for a personalized relationship with the future’ (Scheffler 2012, 31). Reproducing is a widely held desire and the joys of parenthood are ones that many people wish to experience. For these people knowing that they would not have descendants (or that their descendants will endure painful and/or premature deaths) could create a sense of despair and pointlessness of life. Furthermore, the inability to reproduce and have your own children because of a principle/policy that prevents you (either through bans or physical interventions) would be a significant infringement of what we consider to be a basic right to control what happens to your body. For these reasons, knowing that you will have no descendants could cause significant psychological traumas or harms even if there were no associated physical harm. The second is a more general, higher level sense of hopelessness or despair that there will be no more humans and that your projects will end with you. Even those who did not feel a strong desire to procreate themselves might feel a sense of hopelessness that any projects or goals they have for the future would not be fulfilled. Many of the projects and goals we work towards during our lifetime are also at least partly future-oriented. Why bother continuing the search for a cure for cancer if either it will not be found within humans’ lifetime, and/or there will be no future people to benefit from it once it is found? Similar projects and goals that might lose their meaning when confronted with extinction include politics, artistic pursuits and even the type of philosophical work with which this paper is concerned. Even more extreme, through the words of the character Theo Faron, P.D. James says in his novel The Children of Men that ‘without the hope of posterity for our race if not for ourselves, without the assurance that we being dead yet live, all pleasures of the mind and senses sometimes seem to me no more than pathetic and crumbling defences shored up against our ruins’ (James 2006, 9). Even if James’ claim is a bit hyperbolic and all pleasures would not actually be lost, I agree with Scheffler in finding it not implausible that the knowledge that extinction was coming and that there would be no more people would have at least a general depressive effect on people’s motivation and confidence in the value of and joy in their activities (Scheffler 2012, 43). Both sources of psychological harm are personal reasons to reject a principle that permitted human extinction. Existing people could therefore reasonably reject the principle for either of these reasons. Psychological pain and the inability to pursue your personal projects, goals, and aims, are all acceptable reasons for rejecting principles in the contractualist framework. So too are infringements of rights and entitlements that we accept as important for people’s lives. These psychological reasons, then, are also valid reasons to reject principles that permitted or required human extinction.

#### That is the only egalitarian metric---anything else collapses cooperation on collective action crises and makes extinction inevitable

Khan 18 (Risalat, activist and entrepreneur from Bangladesh passionate about addressing climate change, biodiversity loss, and other existential challenges. He was featured by The Guardian as one of the “young climate campaigners to watch” (2015). As a campaigner with the global civic movement Avaaz (2014-17), Risalat was part of a small core team that spearheaded the largest climate marches in history with a turnout of over 800,000 across 2,000 cities. After fighting for the Paris Agreement, Risalat led a campaign joined by over a million people to stop the Rampal coal plant in Bangladesh to protect the Sundarbans World Heritage forest, and elicited criticism of the plant from Crédit Agricolé through targeted advocacy. Currently, Risalat is pursuing an MPA in Environmental Science and Policy at Columbia University as a SIPA Environmental Fellow, “5 reasons why we need to start talking about existential risks,” https://www.weforum.org/agenda/2018/01/5-reasons-start-talking-existential-risks-extinction-moriori/)

Infinite future possibilities I find the story of the Moriori profound. It teaches me two lessons. Firstly, that human culture is far from immutable. That we can struggle against our baser instincts. That we can master them and rise to unprecedented challenges. Secondly, that even this does not make us masters of our own destiny. We can make visionary choices, but the future can still surprise us. This is a humbling realization. Because faced with an uncertain future, the only wise thing we can do is prepare for possibilities. Standing at the launch pad of the Fourth Industrial Revolution, the possibilities seem endless. They range from an era of abundance to the end of humanity, and everything in between. How do we navigate such a wide and divergent spectrum? I am an optimist. From my bubble of privilege, life feels like a rollercoaster ride full of ever more impressive wonders, even as I try to fight the many social injustices that still blight us. However, the accelerating pace of change amid uncertainty elicits one fundamental observation. Among the infinite future possibilities, only one outcome is truly irreversible: extinction. Concerns about extinction are often dismissed as apocalyptic alarmism. Sometimes, they are. But repeating that mankind is still here after 70 years of existential warning about nuclear warfare is a straw man argument. The fact that a 1000-year flood has not happened does not negate its possibility. And there have been far too many nuclear near-misses to rest easy. As the World Economic Forum’s Annual Meeting in Davos discusses how to create a shared future in a fractured world, here are five reasons why the possibility of existential risks should raise the stakes of conversation: 1. Extinction is the rule, not the exception More than 99.9% of all the species that ever existed are gone. Deep time is unfathomable to the human brain. But if one cares to take a tour of the billions of years of life’s history, we find a litany of forgotten species. And we have only discovered a mere fraction of the extinct species that once roamed the planet. In the speck of time since the first humans evolved, more than 99.9% of all the distinct human cultures that have ever existed are extinct. Each hunter-gatherer tribe had its own mythologies, traditions and norms. They wiped each other out, or coalesced into larger formations following the agricultural revolution. However, as major civilizations emerged, even those that reached incredible heights, such as the Egyptians and the Romans, eventually collapsed. It is only in the very recent past that we became a truly global civilization. Our interconnectedness continues to grow rapidly. “Stand or fall, we are the last civilization”, as Ricken Patel, the founder of the global civic movement Avaaz, put it. 2. Environmental pressures can drive extinction More than 15,000 scientists just issued a ‘warning to humanity’. They called on us to reduce our impact on the biosphere, 25 years after their first such appeal. The warning notes that we are far outstripping the capacity of our planet in all but one measure of ozone depletion, including emissions, biodiversity, freshwater availability and more. The scientists, not a crowd known to overstate facts, conclude: “soon it will be too late to shift course away from our failing trajectory, and time is running out”. In his 2005 book Collapse, Jared Diamond charts the history of past societies. He makes the case that overpopulation and resource use beyond the carrying capacity have often been important, if not the only, drivers of collapse. Even though we are making important incremental progress in battles such as climate change, we must still achieve tremendous step changes in our response to several major environmental crises. We must do this even while the world’s population continues to grow. These pressures are bound to exert great stress on our global civilization. 3. Superintelligence: unplanned obsolescence? Imagine a monkey society that foresaw the ascendance of humans. Fearing a loss of status and power, it decided to kill the proverbial Adam and Eve. It crafted the most ingenious plan it could: starve the humans by taking away all their bananas. Foolproof plan, right? This story describes the fundamental difficulty with superintelligence. A superintelligent being may always do something entirely different from what we, with our mere mortal intelligence, can foresee. In his 2014 book Superintelligence, Swedish philosopher Nick Bostrom presents the challenge in thought-provoking detail, and advises caution. Bostrom cites a survey of industry experts that projected a 50% chance of the development of artificial superintelligence by 2050, and a 90% chance by 2075. The latter date is within the life expectancy of many alive today. Visionaries like Stephen Hawking and Elon Musk have warned of the existential risks from artificial superintelligence. Their opposite camp includes Larry Page and Mark Zuckerberg. But on an issue that concerns the future of humanity, is it really wise to ignore the guy who explained the nature of space to us and another guy who just put a reusable rocket in it? 4. Technology: known knowns and unknown unknowns Many fundamentally disruptive technologies are coming of age, from bioengineering to quantum computing, 3-D printing, robotics, nanotechnology and more. Lord Martin Rees describes potential existential challenges from some of these technologies, such as a bioengineered pandemic, in his book Our Final Century. Imagine if North Korea, feeling secure in its isolation, could release a virulent strain of Ebola, engineered to be airborne. Would it do it? Would ISIS? Projecting decades forward, we will likely develop capabilities that are unthinkable even now. The unknown unknowns of our technological path are profoundly humbling. 5. 'The Trump Factor' Despite our scientific ingenuity, we are still a confused and confusing species. Think back to two years ago, and how you thought the world worked then. Has that not been upended by the election of Donald Trump as US President, and everything that has happened since? The mix of billions of messy humans will forever be unpredictable. When the combustible forces described above are added to this melee, we find ourselves on a tightrope. What choices must we now make now to create a shared future, in which we are not at perpetual risk of destroying ourselves? Common enemy to common cause Throughout history, we have rallied against the ‘other’. Tribes have overpowered tribes, empires have conquered rivals. Even today, our fiercest displays of unity typically happen at wartime. We give our lives for our motherland and defend nationalistic pride like a wounded lion. But like the early Morioris, we 21st-century citizens find ourselves on an increasingly unstable island. We may have a violent past, but we have no more dangerous enemy than ourselves. Our task is to find our own Nunuku’s Law. Our own shared contract, based on equity, would help us navigate safely. It would ensure a future that unleashes the full potential of our still-budding human civilization, in all its diversity. We cannot do this unless we are humbly grounded in the possibility of our own destruction. Survival is life’s primal instinct. In the absence of a common enemy, we must find common cause in survival. Our future may depend on whether we realize this.

### NC – Cap Good

#### Capitalism is sustainable and solves extinction through green tech innovation.

Zimet 20 (Saul, Writer for the the Foundation for Economic Education. Capitalism or the Climate? 5-17-20. [https://quillette.com/2020/05/17/capitalism-or-the-climate /](about:blank)/shree)

Knowledge, Deutsch argues, is the variable most relevant to our potential flourishing. When Arctic populations survive in the Arctic and Amazonian populations survive in the Amazon, they do it by means of specific knowledge. If Deutsch were suddenly transported to the primeval Great Rift Valley, he would die for lack of knowledge. Without the requisite knowledge, humans will die virtually anywhere. With the requisite knowledge, encoded in brains, genes, computers, or other substrates, humans can survive virtually anywhere, on the Earth or elsewhere in space:

Whether humans could live entirely outside the biosphere—say, on the moon—does not depend on the quirks of human biochemistry. Just as humans currently cause over a tonne of vitamin C to appear in Oxfordshire every week (from their farms and factories), so they could do the same on the moon—and the same goes for breathable air, water, and comfortable temperature and all their other parochial needs. Those needs can all be met, given the right knowledge, by transforming other resources.

Deutsch explains that even today humans possess the technology to colonize the Moon and other stereotypically harsh environments. At this time in history, colonizing the moon would be prohibitively expensive. But right now you can buy a 4-terabyte hard-drive on Amazon for under 100 dollars. In 1980, that much storage cost about 772 million dollars. The price of technology frequently undergoes enormous reductions as science moves forward. Given that the price of digital memory was divided by millions in just a few decades, imagine the extraterrestrial societies we could conceivably build after perhaps a few centuries of compounding scientific and economic growth.

However, my argument is not that we will ever colonize space, nor that we should plan to do so. As Neil deGrasse Tyson argues, it will probably be trivial to adapt to a wide range of Earth climates long before it is feasible to colonize the Moon or Mars. Rather, I am pointing out that any dependence we have on specific environmental conditions is the result of insufficient knowledge.

Capitalism and the production of knowledge

Throughout nearly all of human history, widespread economic growth per capita did not exist. Productivity per capita was ubiquitously stagnant; generation after generation, millennium after millennium, extreme poverty remained nearly universal and large-scale economic progress was not even imaginable. Virtually everyone lived on less than $3.50 per day in today’s dollars according to research from University of Oxford economist Max Roser, and the average person lived on much less. That’s even worse than it sounds, because (among other reasons) most of the things we can buy today had yet to be invented, and people didn’t have access to most of the information that informs our purchases in the 21st century.

Then, starting in Western Europe in the 16th, 17th, and 18th centuries, an unprecedented breadth of optimism emerged and turned wealth (resources hoarded away in vaults and mattresses) into capital (resources invested in future production and discovery). Thus, capitalism was born, and with it, exponential economic growth began to spread across most of the Earth (a process that continues to this day). As a result, both the rich and the poor are consistently getting rapidly richer for the first time in human history. Whereas 94 percent of the population was in extreme poverty as recently as 1820, in 1990 the number was down to 36 percent, and in 2015 the number was less than 10 percent. And as the world gets wealthier, countless important things proliferate, such as access to nutrition, freedom from violence, improvements in life expectancy, and of course, the access to and production of scientific and technological knowledge.

Knowledge is produced and spread in many ways. Education is one crucial variable, for the purpose of having both an educated population of innovators and a thriving research community. According to research from the Brookings Institute, educational opportunities and outcomes for the affluent radically exceed those for the poor—not just between countries, or within them, but everywhere. This is to be expected. Whether funded by individuals or government programs, it costs a lot of resources to build strong educational institutions and invest in educating generations of students. Poor populations who can barely afford shelter, clean water, food, and medicine don’t have much left over to invest in less immediate necessities such as education. And of course, this creates a feedback loop with causation running in both directions—if a population is uneducated, escaping poverty is much more difficult; if a population is poor, investing in education is much more difficult.

Another foundational tool for knowledge production is innovation, which capital and profit motive facilitate. A large amount of innovation comes from excess capital being invested in new research and development. Poorer populations, whether subnational, national, or global, have less to invest in prospective new inventions and processes of which the details are unpredictable in advance. No system incentivizes useful investments and disincentivizes wasteful investments better than the capitalist system, in which the investor’s own capital is on the line. Incentives and wealth are two main reasons why all of the most innovative nations, such as the top 10 on the 2020 Bloomberg Innovation Index, are capitalist countries. The sociologist Susan Cozzens at the Georgia Institute of Technology offers a succinct description of the process:

In the classic literature of the economics of innovation, private firms are the driving force. They seek competitive advantage in the market by introducing new products that give them a temporary monopoly. By charging high prices during the period of temporary monopoly, the firm makes profits and grows. Introducing new processes can result in competitive advantage if that step reduces costs or increases productivity. In this view, firms drive innovation in order to survive and win in the marketplace.

Indeed, no serious critics of capitalism argue that any other system produces greater material wealth and innovation. Even Marxists, capitalism’s most vehement antagonists, generally acknowledge that no system has ever produced more innovation and abundance. In The Communist Manifesto in 1848, Marx and Engels wrote this:

The bourgeoisie [capitalist class], during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature’s forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground—what earlier century had even a presentiment that such productive forces slumbered in the lap of social labour?

If only Marx and Engels could see how drastically the affluence of the proletariat has grown under global capitalism since then.

Environmental technology

In 1894, just 21 years before Einstein’s theory of general relativity, the Nobel Prize-winning physicist Albert Michelson famously proclaimed, “The more important fundamental laws and facts of physical science have all been

discovered, and these are now so firmly established that the possibility of their ever being supplanted in consequence of new discoveries is exceedingly remote.” Some phenomena, like blizzards and thunderstorms, are somewhat predictable to those with the requisite equipment and training. But the future of human knowledge is no such phenomenon. Discoveries, by their very nature, are unknown until they are not. Innovations are often unimaginable until they occur because the act of imagining them is what brings them into existence.

The history of failures to predict future knowledge is long and robust. In 1901, two years before they both achieved flight by aircraft, Wilbur Wright said to his brother, “Don’t think men will fly for a thousand years.” In 1932, just six years before the successful splitting of the atom, Albert Einstein said, ”There is not the slightest indication that nuclear energy will ever be obtainable.” In 1957, 12 years before Neil Armstrong set foot on the Moon, the father of radio Lee de Forest stated, “Man will never reach the Moon regardless of all future scientific advances.”

Even after world-changing technologies are invented, estimates of their utility are often wildly inaccurate. The Internet, cars, and telephones were all dismissed as insignificant inventions in the years preceding their universal ascendance. So we should be skeptical when we see publications like the BBC, Bloomberg, and Forbes denying the plausibility of imminent technological advances on our climate problems. The truth is nobody has any idea what salutary innovations and discoveries do or do not exist in our imminent future.

Many popular technological solutions to environmental issues have already been proposed in recent years. Carbon capture and sequestration technology is endorsed by climate scientists at the Intergovernmental Panel on Climate Change (IPCC) as well as by United States Congress members from both the Democratic and Republican parties. Inventions are being implemented to remove plastic from the oceans. Sea walls are being engineered in some coastal communities and considered at larger scales to mitigate sea level rise.

In The Climate Casino, Nordhaus writes: “Current estimates are that geoengineering would cost between one tenth and one hundredth as much as reducing CO2 emissions for an equivalent amount of cooling.” But at their present level of development, such technologies are inadequate to the full scope of the problem because they don’t sufficiently address certain dangers such as ocean acidification. Therefore, many environmentalists prefer extreme reductions in carbon emissions, which would stop anthropogenic climate change at its root. But anthropogenic climate change is not just a phenomenon of the future. The Washington Post, the Los Angeles Times, CNN, and other news organizations have noted that it is already having serious effects here and now. The transition from predicted impact to experienced impact took place decades ago. So, how well are we adapting so far?

Scientific American reports that global warming may already be responsible for 150,000 deaths worldwide each year due to its effects on the frequency and scale of floods and hurricanes, droughts and heat waves, spread of vector-borne diseases, and other factors. However, research from the Reason Foundation shows that deaths caused by extreme weather events have declined by more than 90 percent since 1920. University of Oxford economist Max Roser’s research shows that the burden of disease, famine, and other relevant problems have also declined in recent years and decades (the disease statistics cited above are older than the COVID-19 pandemic, but there is no evidence that COVID-19 is directly exacerbated by climate change like vector-borne diseases such as malaria and dengue are). And overall life expectancy has risen globally from about 34 years in 1900 to about 72 years in 2019.

Why are climate-related death rates declining overall while climate change seems to be causing more deaths? Because as economic activity continues to drive up carbon emissions, the resulting growth rates give more communities access to strongly built and climate-controlled buildings, medical education and supplies, life-saving infrastructure such as hospitals and clean water, and many other enormous advantages. When the media and activists argue that burning fossil fuels has not been worth the climate-related damage to human life, they are counting the victims of climate catastrophe while ignoring the beneficiaries of economic growth in developing countries and elsewhere. That is a mistake because the two are inextricably linked.

Choose your own extinction

Of course, just because we’ve adapted extremely well so far doesn’t mean the trend will continue. Dangerous tipping points may yet accelerate the problem beyond our capacity to respond. As living organisms, we have a problem of evolutionary magnitude: we adapt gradually in an environment that can change rapidly. If we go on existing like any other animal, our niche will eventually change so quickly that we won’t be able to adapt fast enough. This has happened to 99.9 percent of all known species since the beginning of life on Earth roughly four billion years ago. These changes have ranged from asteroid impacts, to volcanic eruptions, to viral pandemics, and of course to human activity in recent millennia, and are typically unpredictable to the species they eliminate because they come from outside the limited context in which those species evolved.

Some argue that humans are just another mammal like any other, and that all our claims of exceptionality have been ignorant hubris. If this is true, we are almost certainly doomed to relatively imminent extinction by forces beyond our influence. But thinking this way about the human species does not quite account for the implications of the economic growth trend of the last few centuries. In his book Scale, former Santa Fe Institute president Geoffrey West, whose renowned scientific research put him on Time Magazine’s 2006 list of the 100 most influential people in the world, discusses a profound biological fact about mammal species: they virtually all have the same average number of heartbeats per capita. An average elephant has a long lifespan but a slow heart-rate, and an average mouse has a short lifespan but a fast heart-rate. It all balances out to roughly one-and-a-half billion heartbeats over the course of a lifetime. Other classes of animals follow similar metabolic scaling laws.

A few hundred years ago, before the rise of capitalism, humans were no different—they lived roughly 35 years on average and had about one-and-a-half billion heartbeats just like any other mammal. But gains in knowledge since then, such as innovations in medicine, agriculture, and government, have roughly doubled our life expectancy and with it our average number of heartbeats per lifetime (some dogs and other domesticated animals have been similarly altered by access to human innovations). This constitutes a totally unprecedented departure from the biological status quo.

Technological knowledge, fueled by capital, has allowed us to do many things categorically unlike the achievements of other species as far as we know. The universal extinction paradigm, which has limited all mammal species so far to one million years or less, should be high on our list of patterns to break. We don’t know what existential threats will come or how long we have to prepare for them, but we can’t expect human ingenuity to rush us past the finish line at the last minute without a context of widespread continuous technological and scientific progress until that point—a project it seems only capitalism can hope to fund.

David Deutsch observes that the word “sustain” generally refers to the absence or prevention of change. This is what environmentalists such as Naomi Klein and Alexandria Ocasio-Cortez would like to do with our environment by ending capitalism. Their solution to climate change is what all non-human animals have always done: leave the environment basically unaltered by refraining from large-scale production, and wait around to go extinct. Unfortunately, as Deutsch writes, “Static societies eventually fail because their characteristic inability to create knowledge rapidly must eventually turn some problem into a catastrophe.” Thus, it is not that capitalism is the problem and sustainability is the solution, but that sustainability is the problem and capitalism is the solution.

Every year, global capitalism allows more research and development departments to be funded. Every day it gives more citizens of affluent and developing nations the material wealth required for better education and information technology. Economic growth, coupled with rising carbon emissions, might lead to a climate apocalypse—or it might continue to bring us material and technological salvation. We cannot really know in advance. But we would be crazy to choose the time-tested alternative to capitalism: extinction by stagnation.

#### Economic growth is responsible for drastic improvements in global living standards, and is the only path for future improvements.

Cowen 18, \*Tyler Cowen is a Holbert L. Harris Professor at George Mason University and Director of the Mercatus Center; (October 16th, 2018, “Stubborn Attachments: A vision for a society of free, prosperous, and responsible individuals”, <https://www.goodreads.com/en/book/show/31283667-stubborn-attachments>)

How good is growth, anyway ?

The history of economic growth indicates that, with some qualifications, growth alleviates misery, improves happiness and opportunity, and lengthens lives. Wealthier societies have better living standards, better medicines, and offer greater personal autonomy, greater fulfillment, and more sources of fun. While measured wealth does not exactly correspond to Wealth Plus, these two concepts have come pretty close to one another in the past, especially across the range of outcomes we have observed (as opposed to hypothetical thought experiments and counterfactuals).

We often forget how overwhelmingly positive the effects of economic growth have been. Economist Russ Roberts reports that he frequently polls journalists about how much economic growth there has been since the year 1900. According to Russ, the typical response is that the standard of living has gone up by around fifty percent. In reality, the U.S. standard of living has increased by a factor of five to seven, estimated conservatively, and possibly much more, depending on how we measure prices and the values of outputs over time, a highly inexact science.

The data show just how much living standards have gone up. In 1900, for instance, almost half of all U.S. households (forty-nine percent) had more than one occupant per room and almost one quarter (twenty-three percent) had over 3.5 persons per sleeping room. Slightly less than one quarter (twenty-four percent) of all U.S. households had running water, eighteen percent had refrigerators, and twelve percent had gas or electric lighting. Today, the figures for all of these stand at ninety-nine percent or higher. Back then, only five percent of households had telephones, and none of them had radio or TV. The high school graduation rate was only about six percent, and most jobs were physically arduous and had high rates of disability or even death. In the mid-nineteenth century, a typical worker might have put in somewhere between 2,800 and 3,300 hours of work a year; that estimate is now closer to 1,400 to 2,000 hours a year. 6

Until recently, polio, tuberculosis, and typhoid were common ailments, even among the rich. U.S. presidents George Washington, James Monroe, Andrew Jackson, Abraham Lincoln, Ulysses S. Grant, and James A. Garfield all caught malaria during their lives. Antibiotics and vaccines have existed for only a tiny fraction of human history, and it is no coincidence that they emerged in the wealthiest time period humanity has ever seen. There is also a strong and consistent relationship between wealth and rates of infant mortality; small children do best when they are born into wealthier countries, and that is because wealth supplies the resources to take better care of them.

As recently as the end of the nineteenth century, life expectancy in Western Europe was roughly forty years of age, and food took up fifty to seventy-five percent of a typical family budget. The typical diet in eighteenth-century France had about the same energy value as that of Rwanda in 1965, the most malnourished nation for that year. One effect of this deprivation was that most people simply did not have much energy for life.

In earlier time periods, most individuals performed hard physical labor, and a college or university education—or even a high school education—was a luxury. Leisure time has risen with economic growth. In 1880, about four-fifths of individuals’ discretionary time was spent working, according to economist Robert Fogel. Today we spend about fifty-nine percent of our time doing what we like, and that may rise to seventy-five percent by 2040. 8

The splendors of the modern world are not just frivolous baubles; they are important sources of human comfort and well-being. Imagine that a time traveler from the eighteenth century were to pay a visit to Bill Gates today. He would find televisions, automobiles, refrigerators, central heating, antibiotics, plentiful food, flush toilets, cell phones, personal computers, and affordable air travel, among other remarkable benefits. The most impressive features of Gates’s life, seen from the point of view of a person from the eighteenth century, are those shared by most citizens of wealthy countries today. My smartphone is as good as his. The very existence of an advanced civilization—the product of cumulative economic growth—confers immense benefits to ordinary citizens, including their ability to educate and entertain themselves and choose one life path over another. For further arguments along these lines, I recommend Steven Pinker’s recent book, Enlightenment Now: The Case for Reason, Science, Humanism, and Progress . 9

The economic growth of the wealthier countries benefits the very poor as well, though sometimes with considerable lags. The distribution of wealth changes over time, and not all growth trickles down, but as an overall historical average, the bottom quintile of an economy shares in growth. 10 You can see this by comparing the bottom quintile in, say, the United States to the bottom quintile in India or Mexico.

The richer economy can also do more to elevate the living standards of immigrants. Poor people who move to rich countries usually receive higher incomes and have better living conditions, and their children do better still. The richer the receiving country, the more new immigrants tend to benefit. Central American immigrants to the United States do better than Central American immigrants to Mexico or Nepalese immigrants to India. Immigrants also send remittances back home at a rate that far exceeds governmental foreign aid. Actual upward mobility in the United States far exceeds what the usual numbers indicate, because published statistics on upward mobility do not typically include a comparison with pre-immigration outcomes.

But the chain of benefits does not stop there. Migrants will often return to their home countries, bringing new skills and new business connections. Both India and Israel have developed vibrant technology and software scenes precisely because of their close ties with the start-up scene of the United States. English-language universities in English-speaking countries have trained many thousands of Asian students in science and engineering, again leading to new businesses and, eventually, higher economic growth in their home countries.

New medicines and technologies developed in wealthy nations also make their way to the rest of the world, as illustrated most conspicuously by the rapid spread of the cell phone and now the smartphone. One study predicts that if the leading twenty-one industrial countries were to boost their R&D by half a percentage point of GDP, U.S. output alone would grow by fifteen percent. But it doesn’t end there: output in Canada and Italy would grow by about twenty-five percent, and the output of all industrial nations would increase by 17.5 percent, on average. In the less economically developed countries, output would increase by about 10.6 percent on average. 11

Although these historical processes have often embodied unfairness and long lags of decades or more, economic growth has nonetheless brought wealth to the poor and elevated their status. The Greek city-states and the Roman Empire benefited from maritime trade across the Mediterranean; those regions in turn spread growth-enhancing institutions around Europe, Northern Africa, and the Middle East. The commercial revolution of the late Middle Ages and Renaissance reopened many of the trade routes of antiquity, and eventually human beings started to climb out of the Malthusian trap of very low per capita incomes at subsistence. The wealth of the West helped to enable the export miracles of the East Asian economies. Today, most poor countries seek greater access to wealthier Western and Asian markets, and flourish if they can achieve it. 12

For all the recent increases in inequality within individual nations, global inequality has declined over the last few decades, in large part because of growth in China and India. And the growth in these emerging nations was largely driven by earlier growth in the West and in East Asia. China, for instance, engaged in “catch-up” growth by adopting Western technologies and exporting to the wealthier nations. China has gone from being a quite poor nation to a “middle-income” nation with a sizable middle and upper class.

Although recent media coverage has focused almost exclusively on within-nation magnitudes, recent world history has been an extraordinarily egalitarian time. It is above all else a story about how global economic growth helps the poor. There has been a squeezing of the middle class in the wealthier nations, in part because of increasing global competition. Still, we have seen economic growth, aggregate wealth, and global income equality all rising together over the last twenty-five years. Many citizens in East Asia, South Asia, and Latin America have seen significant gains in their standard of living, and much of this has been a trickle-down effect from the earlier growth of the wealthier countries. Much of Africa is now following suit, bolstered in part by China’s demand for raw materials, and also by the spread of modern technologies such as affordable cell phones. 13

Sometimes extended periods of growth do not confer full or fair benefits to the poor or lower classes, for instance during the early phase of the British Industrial Revolution in the late eighteenth century. Still, the historical record suggests that it was better for Britain to push ahead with economic growth, as this eventually drove the greatest boost in living standards the world has ever seen. To be sure, there were probably better policies which, had they been adopted, would have distributed the benefits of growth more widely (e.g., fewer wars and Poor Law reform and free trade for the British). But even taking misguided policies into account, Britain fared better by pursuing economic growth rather than turning its back on the idea, even though significant real wage gains for the working class often did not arrive until the 1840s.

Nobel Laureate Amartya Sen has promoted the idea of “capabilities” as, if not quite a substitute for economic growth, then an alternative focus. Sen points out that our positive opportunities in life often matter more than the amount of cash in our bank accounts. He also notes that some parts of the world, such as the state of Kerala in India, have relatively good health and education indicators, even though their per capita incomes are relatively low.

Sen’s points are well taken, but they do not put a fundamental dent in the relevance of wealth, or, as I am calling it here, Wealth Plus. The significant benefits accrued from capabilities, such as health benefits, are accounted for in Wealth Plus, even if they are not properly represented in current GDP measures. In other words, Kerala is wealthier than some limited statistical measures imply. Wealth and good social outcomes are still strongly correlated on average, and this correlation is stronger over longer time horizons. For instance, if Kerala does not grow much in more narrow economic terms, it is unlikely to look so impressive in its social indicators fifty or one hundred years from now. Even today, Kerala manages as well as it does in large part because so many Keralans take jobs in wealthier countries, especially in the Gulf States, and send money back home. And compared to other Indian states, Kerala has an above-average measure of wealth, as well as above-average consumption expenditures, both of which are accounted for in traditional statistics. 14

The truth is that economic growth is the only permanent path out of squalor. Economic growth is how the Western world climbed out of the poverty of the year 1000 A.D. or 5000 B.C. It is how much of East Asia became remarkably prosperous. And it is how our living standards will improve in the future. Just as the present appears remarkable from the vantage point of the past, the future, at least provided growth continues, will offer comparable advances, including, perhaps, greater life expectancies, cures for debilitating diseases, and cognitive enhancements. Billions of people will have much better and longer lives. Many features of modern life might someday seem as backward as we now regard the large number of women in earlier centuries who died in childbirth for lack of proper care.

#### Technological innovation successfully dematerializes growth.

McAfee 19, \*Andrew Paul McAfee, a principal research scientist at MIT, is cofounder and codirector of the MIT Initiative on the Digital Economy at the MIT Sloan School of Management; (2019, “More from Less: The Surprising Story of How We Learned to Prosper Using Fewer Resources and What Happens Next”, https://b-ok.cc/book/5327561/8acdbe)

There is no shortage of examples of dematerialization. I chose the ones in this chapter because they illustrate a set of fundamental principles at the intersection of business, economics, innovation, and our impact on our planet. They are:

We do want more all the time, but not more resources. Alfred Marshall was right, but William Jevons was wrong. Our wants and desires keep growing, evidently without end, and therefore so do our economies. But our use of the earth’s resources does not. We do want more beverage options, but we don’t want to keep using more aluminum in drink cans. We want to communicate and compute and listen to music, but we don’t want an arsenal of gadgets; we’re happy with a single smartphone. As our population increases, we want more food, but we don’t have any desire to consume more fertilizer or use more land for crops.

Jevons was correct at the time he wrote that total British demand for coal was increasing even though steam engines were becoming much more efficient. He was right, in other words, that the price elasticity of demand for coal-supplied power was greater than one in the 1860s. But he was wrong to conclude that this would be permanent. Elasticities of demand can change over time for several reasons, the most fundamental of which is technological change. Coal provides a clear example of this. When fracking made natural gas much cheaper, total demand for coal in the United States went down even though its price decreased.

With the help of innovation and new technologies, economic growth in America and other rich countries—growth in all of the wants and needs that we spend money on—has become decoupled from resource consumption. This is a recent development and a profound one.

Materials cost money that companies locked in competition would rather not spend. The root of Jevons’s mistake is simple and boring: resources cost money. He realized this, of course. What he didn’t sufficiently realize was how strong the incentive is for a company in a contested market to reduce its spending on resources (or anything else) and so eke out a bit more profit. After all, a penny saved is a penny earned.

Monopolists can just pass costs on to their customers, but companies with a lot of competitors can’t. So American farmers who battle with each other (and increasingly with tough rivals in other countries) are eager to cut their spending on land, water, and fertilizer. Beer and soda companies want to minimize their aluminum purchases. Producers of magnets and high-tech gear run away from REE as soon as prices start to spike. In the United States, the 1980 Staggers Act removed government subsidies for freight-hauling railroads, forcing them into competition and cost cutting and making them all the more eager to not have expensive railcars sit idle. Again and again, we see that competition spurs dematerialization.

There are multiple paths to dematerialization. As profit-hungry companies seek to use fewer resources, they can go down four main paths. First, they can simply find ways to use less of a given material. This is what happened as beverage companies and the companies that supply them with cans teamed up to use less aluminum. It’s also the story with American farmers, who keep getting bigger harvests while using less land, water, and fertilizer. Magnet makers found ways to use fewer rare earth metals when it looked as if China might cut off their supply.

Second, it often becomes possible to substitute one resource for another. Total US coal consumption started to decrease after 2007 because fracking made natural gas more attractive to electricity generators. If nuclear power becomes more popular in the United States (a topic we’ll take up in chapter 15), we could use both less coal and less gas and generate our electricity from a small amount of material indeed. A kilogram of uranium-235 fuel contains approximately 2–3 million times as much energy as the same mass of coal or oil. According to one estimate, the total amount of energy that humans consume each year could be supplied by just seven thousand tons of uranium fuel.

Third, companies can use fewer molecules overall by making better use of the materials they already own. Improving CNW’s railcar utilization from 5 percent to 10 percent would mean that the company could cut its stock of these thirty-ton behemoths in half. Companies that own expensive physical assets tend to be fanatics about getting as much use as possible out of them, for clear and compelling financial reasons. For example, the world’s commercial airlines have improved their load factors—essentially the percentage of seats occupied on flights—from 56 percent in 1971 to more than 81 percent in 2018.

Finally, some materials get replaced by nothing at all. When a telephone, camcorder, and tape recorder are separate devices, three total microphones are needed. When they all collapse into a smartphone, only one microphone is necessary. That smartphone also uses no audiotapes, videotapes, compact discs, or camera film. The iPhone and its descendants are among the world champions of dematerialization. They use vastly less metal, plastic, glass, and silicon than did the devices they have replaced and don’t need media such as paper, discs, tape, or film.

If we use more renewable energy, we’ll be replacing coal, gas, oil, and uranium with photons from the sun (solar power) and the movement of air (wind power) and water (hydroelectric power) on the earth. All three of these types of power are also among dematerialization’s champions, since they use up essentially no resources once they’re up and running.

I call these four paths to dematerialization slim, swap, optimize, and evaporate. They’re not mutually exclusive. Companies can and do pursue all four at the same time, and all four are going on all the time in ways both obvious and subtle.

Innovation is hard to foresee. Neither the fracking revolution nor the world-changing impact of the iPhone’s introduction were well understood in advance. Both continued to be underestimated even after they occurred. The iPhone was introduced in June of 2007, with no shortage of fanfare from Apple and Steve Jobs. Yet several months later the cover of Forbes was still asking if anyone could catch Nokia.

Innovation is not steady and predictable like the orbit of the Moon or the accumulation of interest on a certificate of deposit. It’s instead inherently jumpy, uneven, and random. It’s also combinatorial, as Erik Brynjolfsson and I discussed in our book The Second Machine Age. Most new technologies and other innovations, we argued, are combinations or recombinations of preexisting elements.

The iPhone was “just” a cellular telephone plus a bunch of sensors plus a touch screen plus an operating system and population of programs, or apps. All these elements had been around for a while before 2007. It took the vision of Steve Jobs to see what they could become when combined. Fracking was the combination of multiple abilities: to “see” where hydrocarbons were to be found in rock formations deep underground; to pump down pressurized liquid to fracture the rock; to pump up the oil and gas once they were released by the fracturing; and so on. Again, none of these was new. Their effective combination was what changed the world’s energy situation.

Erik and I described the set of innovations and technologies available at any time as building blocks that ingenious people could combine and recombine into useful new configurations. These new configurations then serve as more blocks that later innovators can use. Combinatorial innovation is exciting because it’s unpredictable. It’s not easy to foresee when or where powerful new combinations are going to appear, or who’s going to come up with them. But as the number of both building blocks and innovators increases, we should have confidence that more breakthroughs such as fracking and smartphones are ahead. Innovation is highly decentralized and largely uncoordinated, occurring as the result of interactions among complex and interlocking social, technological, and economic systems. So it’s going to keep surprising us.

As the Second Machine Age progresses, dematerialization accelerates. Erik and I coined the phrase Second Machine Age to draw a contrast with the Industrial Era, which as we’ve seen transformed the planet by allowing us to overcome the limitations of muscle power. Our current time of great progress with all things related to computing is allowing us to overcome the limitations of our mental power and is transformative in a different way: it’s allowing us to reverse the Industrial Era’s bad habit of taking more and more from the earth every year.

### AT: Logistics

#### There’s a double bind – either the system of logistics overaccumalates and collapses over its contradictions OR logistical expansion is inevitable – nation states, aid organizations, and social movements across the world are now embracing it – their attempts to resist logistics gets co-opted and only feeds into its power

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The state plays a crucial role in processes of logistical expansion (see Orenstein, 2018). Because both accumulation and war occur in and through space, capitalist states mobilize space as a productive (or destructive) force through strategies of spatial planning, infrastructural investment, and industrial policy. Nations and cities now compete on the basis of strategies to optimize logistics and transportation performance, frequently subordinating democratic principles and the welfare of populations to the needs of supply-chain expansion (see Ziadah, 2018). Danyluk, in this issue, notes how developments in logistics have served as a basis for large-scale state investment in transportation infrastructures, like ports, canals, and railways. The rise of logistics has also reworked the international division of labor and reframed questions of worker strategy. Cheap and rapid methods of commodity circulation have promoted the consolidation of new patterns of sociospatial inequality at the global scale. As Tsing (2009) has argued, the development of integrated transnational supply chains has enabled capital to exploit differences among workforces in different parts of the world, creating new regimes of labor containment and fragmentation based on ostensibly noneconomic features of identity (race, ethnicity, nationality, citizenship status, etc.). For labor, confronting these challenges will require forging new coalitions and developing creative strategies for organizing across distance. Yet logistical space is also riven with contradictions and constantly faced with the real and potential catastrophes posed by “gigantic breakdowns and stoppages” (Mumford, 1961: 544). As Rossiter, 2014 reminds us, the ambitions of logistics are ultimately “operational 622 Environment and Planning D: Society and Space 36(4) fantasies” (2014: 54) that rely on, even as they aim to contain, a recalcitrant polity through calculative forms of domination and repression. As such, we should be careful not to reify logistics as a seamless system of instantaneous flow and total functional integration. By paying attention to the frictions and stoppages that are part and parcel of logistical processes, critical scholars have noted that even as logistics is taken up as a tool of imperial dispossession and capitalist power, it also produces new sites of vulnerability and potential emancipation. To this end, logistics has become a growing force not only among states, corporations, military forces, and aid organizations but also within social movements and activist organizations that aim to challenge their practice. Beyond the accidental breakdowns and stoppages that threaten just-in-time supply chains are more deliberate efforts to interrupt the circulation of violence and remake environmentally and socially just forms of provisioning and sustaining**.** A critical engagement with logistics is a feature not simply of academic practice but of intellectual, political, and practical organizing across various sectors of work and arenas of contestation. These efforts are clearly not brand new—not only in the transportation sector, where workers have long struggled over their conditions of work, but in myriad movements that have worked to sustain themselves over time, including through uprisings, occupations, and revolutions. As logistics has ascended to a place of prominence in the organization of war and trade globally, it has also become subject to new frequencies and forms of contestation. Alberto Toscano (2014) highlights this shift when he asks, “Can we define or declare a relocation of political and class conflict, in the overdeveloped de-industrializing countries of the ‘Global North,’ from the point of production to the chokepoints of circulation?” Such an approach centers sites of physical circulation as pressure points where mass movements can contest the violence of state and capital, signaling a shift in tactics from the withdrawal of productive labor power to disruptive blockades and sabotage along the arteries of trade (Clover, 2016; Degenerate Communism, 2014; Oakland Commune, 2011). A scholarly discourse has emerged under the banner of “counterlogistics” that engages labor, anticolonial, and antiracist struggles (Bernes, 2013; Chua et al., 2016; Fox-Hodess, 2017). We might also trace a growing reliance on a critical practice that explicitly names the field: logistics groups, tents, and committees are now a mainstay of radical organizing, pointing to the possible repurposing of logistical models as sources of care and social reproduction (Armstrong, 2015; Cowen, 2014; Crashnburn, 2014). As Attewell (2018) argues in this issue, initiatives like the US Agency for International Development’s Commodity Export Program “contain within them the germ of a different kind of logistics: one that preserves its will to care, while dispensing with its necropolitical baggage” (735). In this vein, one fertile arena for future research is to examine more expansive possibilities for counterlogistics—asking, following Toscano (2014), “What happens then if we consider the question of circulation less literally? And what would it mean to struggle not simply against material flows but against the social forms that channel them?” By focusing on the social relations that underpin logistical processes, critical engagements with logistics might be productively nudged towards more emancipatory political ends by exploring how counterlogistical contestation is being waged not only in the sectors we might immediately associate with goods circulation but so too in the broader social relations of logistical society. Yet we should be careful not to fetishize counterlogistical projects without a firm grasp on how the state and capital are invested in controlling the spaces of stocks and flows. Attempts at resisting or disrupting circulation can be co-opted, contained, or absorbed—in the construction of redundant container shipping networks, for example, which give corporations multiple options for rerouting cargo around traffic bottlenecks or restive labor forces. Further, as Timothy Mitchell (2011: chap. 1) and Dara Orenstein (2018) have Chua et al. 623 shown, tactics of sabotage and disruption have themselves become integral to processes of value realization, where capital’s power rests not only in speeding up circulation but also in the capacity to slow it down. More broadly, while the growing prominence of “circulation struggles” (Clover, 2016) presents rich ground for scholarly exploration and political organizing, there is a danger in fetishizing the tactics of material interruption per se. More important than the form of political resistance are its contents, the concrete social relations in which it is embedded and that it seeks to transform. As Chua (2017: 165) argues, “even if material structures are constitutive of the extant political order,” the act of disrupting or sabotaging material flows alone is not enough to reconfigure logistics: “circulation struggles can only have revolutionary potential if collective power is politically mobilized across the supply chain.” Logistical systems increasingly encroach on everyday life under the justification that rapid, efficient circulation is necessary to the welfare of the economy, the state, and its people. Yet, as both a calculative rationality and a practice of spatial ordering, mainstream iterations of logistics work to promote the accumulation of capital and state power in ways that exacerbate existing inequalities and produce new dispositions of life and death (see Attewell, 2018). The articles collected in this issue point to the myriad ways these apparatuses also distribute inequality, immiseration, and “vulnerability to premature death” (Gilmore, 2007: 28). At the same time, the gap between the idealized imagination of logistics and its messy implementation reveals that the project of making the world safe for circulation is always incomplete. A critical engagement with logistics attends to the struggles, social conflicts, and tensions that can never be excised from global flows. This liveliness of logistics is one aspect that comes to the fore in this theme issue. Interrogating the multiple, varied, and contested lives of logistics brings into focus the violence committed in its name, the vulnerabilities of its networks, and the political possibilities latent in its present-day forms.

#### Beller concludes their hashtag politics of edgy dissent link just as much, but the only example in their evidence is Banksy – we’ll include yellow for context

Beller, 21 (Jonathan Beller, Professor of Humanities and Media Studies and Critical and Visual Studies @ Pratt Institute, has written extensively on the Philippines, computation, political economy, and the attention economy. “Introduction:  The Social Difference Engine and the World Computer,” in *The World Computer: Derivative Conditions of Racial Capitalism*, Duke University Press, 2021.)

Given the sea change in the nature of languages and images themselves—their wholesale transposition and transformation from a means of representation to a means of production— the difficulty here is both with the substrate of communication (its bits) and with the us-versus-them perspective:, we want to ban advertisers but today we must also confront the disturbing possibility that we are them. Remember, “they” program “our” language and “our” imagination, “we” speak “their” thought—indeed, that is our work, or rather our labor. What to do with the fact that “we have seen the enemy and he is us?” One could say, one could want to say, “I don’t care who you are: if you live in the first world, if you live in the Global North, then fuck you! You ain’t no victim, even if you’re sick.” But who would be saying that? Probably some other Northerner, writing about how culture or the Venice Biennale, as if it were, could or should be more than a lavish spectacle of global suffering staged for a cosmopolitan elite. As capital’s nations, banks, armies, schools, languages, newspapers, and films did to its colonies and colonial subjects, the current institutions from states to computer-media companies do to “us”: they command us to make ourselves over in capital’s image for their own profit through networked strategies of expropriation and dispossession. “We” do it to ourselves, and our representations of self and other are designed to sell a version of ourselves back to ourselves so that we can perform further work on what is now the raw material for the next iteration of images. Therein lies our ontological lack, an ontological lack of solidarity and of even the possibility for solidarity. Therein lies the desire for and indeed necessity to become a plantation manager—the word is overseer. Though it is beyond the scope of this essay, this digital neocolonialism that practically commands global Northerners to in one way or another accept Nazism and genocide with their cappuccino could be understood as being on a continuum with the internal colonization of Europe by the German banks—which depends of course on the distributed production of a kind of neoliberal “realism” that Mark Fisher (2009) called “capitalist realism,” and was only ever a hair’s breadth away from fascism. This fact of our investment in and by advertising, the conversion of the sign to what I call the “advertisign,” poses a genuine problem for theory— indeed an unprecedented one. This problem is particularly evident considering the material conditions (class, nationality, education, race, language, etc.) of the participants in the would-be counterhegemonic theoretical discussions of culture and policy that presuppose the books, computers, schools, and institutions that sustain these. Those within the circuit of these discussions have already passed through a homogenization process which programs them in compatible systems languages. Without submitting ourselves and our own aspirations to radical critique, without conducting a Gramscian inventory of our ostensibly internal constitutions, we run the risk of merely trying to set up a competing corporation with a new business model. The revolution will not be televised; decolonization will not be a brand. Any would-be anticapitalist “we” runs this risk of coopting and cooptation from the get-go, particularly if it does not think about the materiality of social production from top to bottom: class, yes, but also race, nation, gender, sexuality, ability, geolocation, historical stratification. The world’s postmodern poor, the two billion–plus living on two dollars a day, also labor to survive in the material landscape organized by the post-Fordist social factory its anti-Blackness, its Islamophobia, its endless and mutating racism and imperialism. However, from the standpoint of capital, the role of those at the bottom is to serve as substrate for image-production and semiosis; not only in factories, cottage-industries, subsistence farming, and informal economies, but also as starving hordes; “irrational,” criminalized or surplused populations; subject-objects for policing, encampment, and bombing; desperate refugees; and even as voids in the idea of the world—as sites of social death. Forgive me, but I’d wager that no one capable of understanding these words can claim full exemption from the indictment they issue regarding structural complicity with the production and reproduction of everyday life. Humans are troped (via discourse and the screen) to organize military production, national policy, internment camps and prisons, bourgeois imaginations, museum shows, corporate strategy, and market projections. Let us clearly state here that any program that does not admit this excluded planet into dialogues that vitiate the monologues imposed by capitalist informatics and advertisigns is still floating in the realm of the ruling ideas and therefore participant in murder. These ruling ideas are the ones whose density and weight, whose material support and very machinery, threaten to further crush the late-capitalist poor out of not just representation but out of existence. This erasure and disposability, imposed by systems of informatic inscription designed to absorb every output of sense, is the achievement of the advertisarial relations endemic to computational racial capitalism. When information is an advertisement for itself that presupposes the operating system of the world computer as virtual machine, banning what we recognize as advertising on the internet, even if an excellent beginning, is just not adequate to address these issues of representation, social justice, planetary and climate racism, and emancipation. To summarize: the forms of sociality which are the conditions of possibility for the online, informatically organized relations—best characterized as advertisarial—run through every sector and register of planetary life. The internet, while recognizable as an effect and a cause of the current form of planetary production and reproduction, cannot be considered in isolation as a merely technical platform or set of platforms if its historical role is to be properly understood. To take the internet as an autonomous technological force results in a species of platform fetishism that disavows both the histories and material conditions of its emergence, conditions that are, in short, those of screen culture and racial capitalism; this is to say that it, the internet, is the very means by which the capitalist suppression of global democracy (which is emphatically, economic democracy as well) has been accomplished and continues. If the internet is autonomous, it is because it expresses the autonomization of the value form. As noted previously, with the hijacking of communications and semiotic infrastructures by racial capitalism, the medium is the message and the message is murder. To ban advertising on the internet would be a good start —but what if the whole thing is advertising? One reading of what I have said thus far might suggest that, given the expropriation of the cognitive-linguistic, our volition is overtaken by capital logic; and given our inability to cogitate in any way that is genuinely resistant to capitalist expropriation, coercion, strictly speaking, is no longer necessary to impose cooperation for capitalist production. We “want” to cooperate productively, our desire—which, from the dispossession of even language and mind constitutes ourselves as subjects in the media ecology of the capitalist technical image, that is, in and through the organization of digital information—is itself an iteration of capital, a script of becoming predestined to become capital. The old language scored by the new image machines and their extractive algorithms locally organizes cooperative subjects who want to cooperate with vectoral capitalization. We want to provide content in order to derive currency and survive. Our solidarity on the internet produces more internet. Thus, in a certain way—and particularly since we no longer properly have any thoughts of our own—we all collaborate in a world organized by images and screens, thereby participating more or less mindlessly in the seamless realization and triumphant apotheosis of the programming business. However, I am sorry to have to report that the dystopian vision here is not quite as bucolic as even this already dreary picture of unwitting and irredeemable pulverization and servitude. While I do see that representation and semiotics have been increasingly flattened à la Orwell and Marcuse by a vast internalization of the apparatuses of oppression (in which “thought” is the [productive] thought of the [capitalist] Party and “repressive desublimation” is an engine of capitalist-fascist production) the “old problems” like the hierarchy of class have not gone away; neither have racism, sexism, homophobia, transphobia, ableism, and fascist nationalisms ceased playing their roles to create vectors of privilege for white male–identifying aspiration. Indeed, most thought today, such that it is, is all about maintaining hierarchical society. The thinking runs thus: capital is nature, capital is eternal, capital is information is nature. Or, in a more pedestrian mode: human beings are naturally acquisitive and competitive, economic growth and technological advancement mean progress, this tech provides, or almost provides, a color-, gender-, and religion-blind society, and so on—and one must advance one’s place in it by any (crypto- or not-so-cryptofascist) means necessary. Of course, there exists better thinking out there. Mia Mingus: “As organizers, we need to think of access with an understanding of disability justice, moving away from an equality based model of sameness and ‘we are just like you’ to a model of disability that embraces difference, confronts privilege and challenges what is considered ‘normal’ on every front. We don’t want to simply join the ranks of the privileged; we want to dismantle those ranks and the systems that maintain them” (Mingus 2011, cited in Puar 2017: 16). However, there is broad-band, ambient programming that facilitates assuming neo-liberal and full-on fascist subjective sovereignty. This programming seeks triumphant brushes with plenitude (communion with the big Other, as distinct from the racial or otherwise other, becomes the ego-ideal), and this same programming is violent, competitive, hateful, mean-spirited, and alienating when embraced —at the same time that it is also cooperative, simpering, and abject. Servitude, even when automatic and mostly unconscious, is unhappy and, as we can see any day from the daily news, utterly pathological and sick. Of course, this diagnosis represents a huge generalization, but despite its broad-brushing lack of subtlety we may find that such a schizoid oscillation between entitled adjudicator and abject supplicant sums up the contours of your average reality television show or comments section on YouTube. It is Bateson’s (2000) and Deleuze and Guattari’s (1977) schizophrenic, caught in the double-bind, who has become the capitalist norm—the one who struggles to negotiate in the form of contradictory signals the aporias of hierarchical society, while reproducing it, and all the while experiencing their own psychic dissolution as an injunction to create.3 With this schizoid capture in mind, let me then develop my question about the internet—“What if it is all advertising?”—in the framework of post-Fordist production. The argument is that, in the context of virtuosity and the expropriation of the cognitive-linguistic by computational racial capital, sociality itself has become advertisarial, a ceaseless waging of capitalized exploits designed to garner attention and value for oneself and one’s capitalists. This situation represents—indeed imposes—a derivative logic, a logic in which every action is a hedge, a kind of risk management devoted to maximize a return. In addition to the fractalization of fascism, in which agency is manifest as a profile that has aggregated the attention of others, advertising has worked its way into the sign itself, into the image, and into data visualization, and it has generated the advertisign. All signs become points of potential cathexis, derivative positions on the underlier that is social currency and ultimately value. This new type of sign is not simply the brand but also an element of vectoral language (Wark 2007): functionalized words in a production channel, engaging in the micromanagement of desire, the production of new needs, and the capturing of the imagination, all in order to induce linguistic and behavioral shifts in the attention of others while aggregating their attention for oneself—turning their heads with an interface. This combination of the manipulation of market conditions (that is, everyday life) through techniques of risk management is no longer merely the province of advertising but of so- called human interactivity (what was once just communication and before that culture), now become advertisarial through and through. From Smythe’s claim in the “Blindspot” essay (1977) that all leisure time has become labor time, to Virno’s (2004) notion of virtuosity, we have seen aspects of this model for the capitalist overdetermination of apparently unremunerated time before. However, here—with the financialization of expression—we clearly grasp that the financialization of everyday life means also the convergence of semiotics and financial derivatives. Given the thoroughgoing intensification of vectoral, and in fact matrixial, signs, we need to investigate its implications in the context of a discussion of radical media practice. I will make two additional points here before shifting gears and turning at the end of this chapter to what I identify as an aesthetics of survival—an aesthetics that emerges from within the matrix of advertisarial, schizoid capture. The final chapter of this volume will endeavor to extend aspects of such socioaesthetic forms, those resistant to computational racial capitalism, to new notions of radical finance and the possibility of platform communism. If, as was already becoming true in the cinematic mode of production, the dominant means of representation have become the dominant means of production, the questions of and models for political agency are radically transformed, and the urgent need to decolonize communication and decolonize finance presents itself. Future communication will require a cybernetic approach, and, as we shall argue, this cybernetic approach will necessarily be financial, though it will be reaching toward a different order and different mode of production. Like communism, because it will need to be communist, it will see economic transformation of the material relations of production and reproduction as essential to the revolution. It will draw on the repressed and extracted cognitive-linguistic resource of the racialized and otherwise marginalized and configure ways to make our voices matter both as meaning and as tools for the reorganization of the material world and the social relations therein prescribed. Language and images are neither inside nor outside; they are part of the general intellect—currently they are at once media of thought and of capital. We also know that languages and images are not isolable, meaning that they are not and have never been stand-alone entities but rather exist in relation to their media, their platforms, which are again inseparable from society and its institutions. Furthermore, each platform relates to another platform. Paraphrasing McLuhan, we could even say that the “content” of a media platform is another platform. Thusly the general intellect is inseparable from its media platforms and their financials. We see that the general intellect, once largely held in common, is increasingly being privatized; the very media of our thought belong to someone else. This expropriation of the media commons is precisely the precondition of the real subsumption of society by capital. It is an extension of the ongoing expropriation begun by primitive accumulation and money as capital, and it has been accomplished through the financialization of media as platforms of extraction. The ramification of mediation by computation and information has resulted in its convergence into formats offering derivative exposure to underliers that are the expressive vitality and futurity of our communication. We therefore no longer have any organic relation to the materials for thought itself (sincerity has become a myth, at least in the medium-term of most circles)—the words, images, and machines we require to think, to express ourselves, to interact, and to know have been ripped from the species and privatized via the longue durée of dissymmetrical exchange. We work on the words and images, but as numbers they belong to someone else. The media themselves have become forms of capital—forms of racial capital—and our usage of these media means that we work to add value that valorizes capital, for the capitalist and within a relation designed as much as possible to guarantee that our creative acts necessarily occur as dissymmetrical exchange with capital. I write this book in a discourse that does not just not belong to me because it is shared, but in a discourse that is increasingly the property of a set of institutions— publishers, journals, universities—that all have their eye on the bottom line. The means by which we most intimately know the world, ourselves, and our desires (our images and words) are themselves vectors of capitalization intent upon converting our very life-process into surplus value (which is to say value for capital). We need strategies that will seize the means of production and create a reverse subsumption of affect, intellect, knowledge, capability, communication, and community. When all media have converged as economic media, it is economic media that must be re- engineered. Again, I think this subsumption of cognitive and affective capacity, the quasi-automating (scripting) of productive labor for capital, is what Stiegler means by the proletarianization of the nervous system—which would include the proletarianization of the pathways of feeling and thought. Our affective capacities are put to alienated and alienating work in the social factory, and their product too is alienated, producing ever-intensifying and ever-accumulating dispossession and disempowerment as the dialectical antithesis of its simultaneous production of unprecedented wealth and power for the cyborg avatars of the great media conglomerates. Intellect and emotional intelligence, the product of thousands of years of species- becoming, is being strip-mined so that extraction machines may continue their furious innovation to further discount people. I write this book aware of the pressure to think it just right, to at once extend thinking in order to command attention and produce new needs, but also to delimit it, to control myself, and to put the reins on whatever counterpower may rage within my body, because academia can tolerate only so much “bullshit” and no more. Yes sir, I’ll be careful not to cross that line, but a word to the woke: the bullshit is the best part. From a historical perspective, this encroachment on the means of representation—that Banksy and I and a billion others join the silenced majority in opposing—indicates that the individual subjective agent, itself a platform for sociality that developed with the rise of capitalism (as the subject who relates to other subjects in the market, the bearer of the commodity and thus its thought), is nearly defunct. As has been noted previously, in a world where life processes are stripped, ripped apart, rebundled, and sold as derivative exposures, the individual subject is an outmoded technology despite the fact that it still appears as a skeuomorph in certain updated technosocial apparatuses—like the latest forms of films, games, influencers, and versions of national politics that proffer invitations to momentary individualistic identification for the dividual purpose of providing a sense of familiarity and orientation. While palliative for some in small doses, such individuality is no longer a viable (which is to say, sustainable) fantasy. The real thought is that of the infrastructure, of the AI that codes our meat and scripts our sheets. Sure I take up the mantle for a few moments each day to appear as the agent of this text, suiting up as the operator of an intellect that might be adequate to the informatic shit-storm of racist, capitalist, imperialist, patriarchal, for-profit assaults, but then I drop off into an ocean of petty concerns, food shopping, and home repairs. And even when I say “I,” to perform as the nexus of all this insight, I also know that it’s hardly me talking. I’m just curating at the gates of shit that needs to be said, and hopefully titrating to let the right stuff through. That’s part of my politics though Dog knows that I could create a more lucrative named-professor type profile with just a little more discipline, a bit more self-interested adherence to the protocols of the academy’s factory code. Instead, there is the effort to overturn, to be or at least to live something beyond being the scribe of the world computer, to at once witness the drama of the emergence of the intelligence of commodification, testify to its outrage, and intimate the possibility of its overthrow. Such would be the art of this text, practiced at the limits of disciplinarity and of subjectivity, guaranteed by nothing and no one. The expiration of the subject form, imminent since the subject’s first intimation of mortality—and made structurally mandatory by Freud and especially, with the full-blown rise of the sign at the moment of it radical marginalization by visuality, by Lacan—is not necessarily a cause for lament, despite the increasingly intense fading of its incalculable beauty, its sad reduction to cliché. From a political perspective, it means that within each concrete individual body the presumed continuity of the individual is riddled with contradictory and indeed unassimilable indicators; it means also that there exists in differing quantities and qualities capitalist and noncapitalist striations or sectors. Hallways of emptiness, but also hallways of love. Like bundled assets, the mind-body is tranched by executable logics organized by a calculus of risk available to investors. There are, to be a bit simplistic, aspects of desire that are programmed (indeed farmed) to produce practices that function in perfect accord with capitalist accumulation strategies (individualizing or schizoid) and aspects of desire that are atavistic or collectivist, utopian, communist, or maybe even just plain lonely, and, in short, subprime. In reality, of course, desire is more singular than even such formalizations might indicate. Insert your favorite snippet of poetry here. Hortense Spillers in “All the Things You Could Be by Now If Sigmund Freud’s Wife Was Your Mother” (1997) invokes “the Dozens” and the music of and like that of Charles Mingus (152–3), to make present an “interior intersubjectivity”(140) testifying to the rich unaudited psychic life of what might today be called Blackness. There are vast resources beyond the easy resolution of hegemonic hermeneutics whether deployed by institutionally validated psychoanalysis or compressed by current systems of informatic extraction. In agreeing with Freud that consciousness makes up a small part of mental life when compared to the preconscious, the unconscious, dreams, and so on, but in rejecting the normative assumptions and disavowals (including his own Jewishness) that situate Freud and the psychoanalytic discourse that will become part of European and U.S. bourgeois society, Spillers recognizes a vast store of mental life and the possibility of listening anew. However, when speaking of politics now, we therefore necessarily speak of the abstract forms available for the conceptualization and deployment of concrete emergences whether referring to haecceities that are innumerable or collective forms of existence and psychic life actively mediating between “the one” and “the ‘masses’ ” (141). Let us listen anew. Acknowledging that we ultimately and if possible immediately want to “marry our thought” (Wynter 1994b: 65) to the wealth of subaltern forms of life and the care of the bios, allow me then to put the situation of the post- Fordist subject thusly: in Imperialism, the Highest Stage of Capitalism, Lenin (1939) showed how imperialist dividends complicated class issues in England, since many people, otherwise part of the working class, got a share of the dividends of imperialism by clipping the coupons of their investments in racist, exploitative British enterprises across the globe. Today this race-based class fractionalization is fully internalized in the Global North; on our iPads built by Chinese slaves from blood metals extracted from the Congo, we may momentarily feel like biomorphically unmarked nobles in the global cosmopolis; while on the job market or when simply seen in our raced and gendered embodiments, we are abjects. Materially and intellectually we are nodal points on a global network. The signal oscillates between narcissistic megalomania and utter abjection and can be affected by a billion parameters taking us from melancholia to outrage. Thus, even the concrete individual is composed of class fractions, race fractions, gender fractions. In the form of signs, we clip coupons that validate our investments. The language of object-identification, we observe here, cannot really keep up with the fluctuations resulting from the throughput of code as we work to identify and disidentify our agency. Can we audit a different mode of emergence, a different futurity than one inexorably overcoded by capital? Of course this is still somewhat simplistic and also class-specific, as many (billions even) never get to participate as an enfranchised global citizen in any aspect or moment of life, even if the lived experience of these same billions is radically overdetermined by the class(es) from which they are excluded.4 The gilded poverty of the enfranchised, as opposed to the mere poverty of the rest, is now a measure of connectivity. A more complete view is that we are the product of the world system and thus everything we are has been produced vis-à-vis globalization, and therefore everything bears the trace of the system in its entirety (again, in varying proportions). This conceptualization of concrete individuals (bodies) as global communitarian products forced to varying degrees into templates of individualized risk by capitalist states, is not to erase class; however, it suggests that, just as Fanon saw the great European metropoles as the product of third world labor, we are all products of the worst conditions prevailing in the Global South and around the planet. Global inequality is internal to our being. It is us. How then does one (such a one who is relatively enfranchised by the derivative language of texts such as this one) inventory those relations and produce them as formations of solidarity rather than as disavowed residuum? Is there another data-sphere, a communist one? Can we build communist interfaces, networks, and finance? How would we register, track, amplify, and render actionable the communitarian affinities, solidarities, obligations, and debts, the resources in the wake of too many genocides to count, that in actual practice underpin the official economy, collective life, and whatever authentic hope is left to our species? Perhaps we have arrived at a question worthy of theory: Is there, could there be communist algorithms? Communist derivatives? Derivative communism? We are looking for that path. To add to my point about the shifting, distributed character of political actors—that goes so far as to suggest that we can no longer think only of actors but rather must think of vectors and fields in addition to thinking of the resources developed in cultures of survival—I will make a second observation. A political intervention in the advertisarial relations that have this planet heading toward environmental doomsday requires not only revolutionary policy but revolutionary culture. (I defer further discussion of a third requirement, revolutionary finance, to the final chapter.) This culture must take into account that, for many on this planet, Armageddon is not the future but an ongoing constant. My call here (which should not be entirely unfamiliar, as it gives petit bourgeois intellectuals something important to do) is to (re)politicize semiotic and affective structures and practices, including and perhaps especially those we might control, for example our own utterances—our expression. Of course, to call them “our own” seems to contradict what I’ve said about the expropriation of the cognitive- linguistic and the intensification of aphanisis by visual, verbal, and digital media derivatives, but it is here precisely that we confront one of the significant material contradictions of our time: who or what speaks in us? This question, which I shorthand using the phrase the politics of the utterance and which you can experience palpably right now (as you endeavor to think), seems to me to insist that our idea-making must actively produce its solidarity with the dispossessed. We must struggle for the radical constellation. The question concerning the politics of the utterance, asked here in a strange passage of this text through a beyond-academic terrain, a moonless forest the traversal of which may or may not at this point lead us back to the plot, also raises the question of becoming, as well as the questions of agency and of action within the capitalist image— programmable images, racializing and racist images that, in the terms we have set out, are functionally omnipresent. Continuous media throughput has generated a capitalist imaginary structuring both language function and imaging processes, coordinated at scales and by calculative logics that exceed individual comprehension. Though the occasion is upon us, we must struggle for space and time to think. We must open a spread on which to bet against the dominant order. We glimpse, and we feel, that to insist upon the unremitting relevance of both culture-making and of cross-cultural transnational solidarity helps to avoid platform fetishism because it sees the internet and its machines not as a set or collection of autonomous technologies but as a historically emergent system of value-expropriative communication and organization, built directly upon older but nonetheless contemporaneous forms of inequality, including but not limited to historically emergent techniques of gendering, racialization, and imperialism, and embedded in the living flesh of the world. All of this calculative interconnectivity and networked agency implies, contradictorily, in fact, that the internet is not all advertising—but neither is advertising all advertising. It is also murder and struggle. Banksy knows that. The advertisarial relation is the programmatic relation encrypted in the apparatuses of capital: the war of each against all, taken all the way from finance, computation, and surveillance to the speech act and the imagination in accord with the autopoietic algorithm of the distributed Leviathan. Marx himself saw capitalism as vampiric, and today’s processes of capitalization are even more totalitarian, more widely distributed, and more blood-, life-, and indeed soul-sucking than even in prior eras—though such comparisons don’t do those killed by past iterations of capitalism any good. Despite the disavowals to the contrary, we recognize that capital needs labor, needs metabolic time more desperately and more voraciously than ever before (what else is biopolitics?) and, furthermore, that it wages war on life-time on all fronts, in order to secure labor power, its product and basis, at a discount. The pyramids of inequality become internal fractals, and even as the base broadens, the tip with the all-seeing eye (that is not a subject) ascends ever higher. We do not yet know what can be destroyed or indeed built with the massive appropriation of Banksy’s rocks, but we do know that at present there is total war against our using them to build anticapitalist, nonhierarchical, horizontal, solidary sociality. The refusal or détournement of capital’s encroachment is itself a creative act. Perhaps we have only begun to glimpse what a total refusal might achieve.

#### “Feeling others, feeling through you” is a taxonomy of sentimentality mired and confirmed by a logic of biological racism. The 1AC’s investment in hapticality as sociality is also an investment in a  sympathy that calcifies the superiority of whites against the sympathyof the colonized –that evokes moral feelings of social good for the sake of liberalindividualistsubjectivity – turns the AFF’s project.

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**The volatility of the impressible body**, which depended on its impressions from the external world for its own development, requireda strict disciplinary technology. **Sentiment**was enlisted for this purpose. Thealleged supple **impressibility**of the civilized races ensured that they continuously developed new, hopefully advantageous, physical and mental characteristics. Most important among these was the capacity for sentiment. Cope argued that the advanced “social life and the family relation” of civilization “have developed the benevolent sentiments and the affections,” as the effects of evolution became the stimuli themselves. **Sentiment**, in these scientists’ work, involves the ability to make an appropriate and **sympathetic reaction to an impression**, rather than an impulsive and self-serving one. Cope and his cohort posited that **racial progress** stems from the ability of the civilized to control the impulses of their body through **the faculty of sentiment**.Le Conte surmised that “sympathy, pity, [and] love” thus drive species change among the most advanced races, freeing them from the indignity of struggle.Hence for Cope “evolution is . . . the long process of learning how to bring matter into subserviency to the uses of mind,” or the sublimation of the body to “self-control, from the material as well as from the mental standpoint.”**Sentiment**thus **functions asan epistemology**, an ontology, and **a discipline**. Scientific articulations of sentimentalism clarify that sympathyhas an intercessory and teleological function, in thatit ensures that civilized responses to stimuli benefit racial progress. In her recent analysis of the role of sympathy in late nineteenth-century sciences of the mind, Susan Lanzoni argues that late nineteenth-century psychologists and philosophers believed sympathy to increase with evolutionary advance. For Herbert Spencer, **sympathy**is the “**awareness of consequences**,” or an access to the future as opposed to the primitive “impulsivity” of “reflex-oriented” responses,which are **mired in the eternal present**.Primitive bodies, Spencer maintained, were capable only of reflexes, not of reflection; they kicked experience off rather than absorbing it over time. In his view, social experience reverberates off black bodies in artful mimicry entertaining to their racial superiors, but arguably useless to themselves. Otherscientists proposed that a “savage would throw a crying baby to the ground because of **‘torpid sympathy**.’”For Cope, sympathy enables the civilized to transform basic impulses of pleasure or pain into a moral feeling that considers the social good, yetstillensures **individual development**. Cope characterized sympathy as an advanced faculty evolving from sentiment that acts as a gatekeeper between the impressible civilized body—especially the more delicate female constitution—and its environment. This mediating capacity ensures that those who possessed it could overcome the threats inherent to the impressible body, for sympathy allowed them to transform others’ suffering into opportunities for personal growth rather than for degeneration. On account of its developmental function, Cope declared thatsympathy is ultimately in one’s own self-interest:“ The affections or sympathies should be developed sufficiently to produce a desire for the happiness of others, through the pleasure the happiness of others gives us.”Presenting the formula of the domestic novel as evolutionary doctrine—that making others feel good, especially those beneath you in social stature, **brings its own reward**—Cope lays bare the function of sympathy as building the actor’s body and character. Cope’s emphasis on the asymmetrical relations of sympathy illustrates the aptness of Glenn Hendler and Elizabeth Barnes’s analysis that sentimental sympathy functions as an “act of imagining oneself in another’s position” that ultimately works to constitute the self.**Sympathy**bothincreases and regulates the body’s affective experiences. **Abolitionists famously drew on the sentimental discourse of shared feeling**. Yet **sentimental taxonomies of feeling**broadly denied a common intensity of feelingand self-possession. As Saidiya Hartmanhas argued,the sentimental principle that **a shared capacity for pain renders all life worthy of political recognition** was a process that cut two ways, one that subjected **blacks** *to***power** far more than it granted liberal individualist subjectivity to the enslaved.The American School’s emphasis on the reflective quality of sentiment, as opposed to the immediate and impulsive acts of sensation, suggests a final way in which these scientists drew on sentimentalism in their account of species change. As Dana Luciano has argued, nineteenth-century U.S. sentimentalism marks “a way of using deployments of mixed feeling(pleasure and pain) to negotiate problems in time.”For these evolutionists, fundamentally concerned with the narration of temporality, sentimentalism proved a rich resource through which to challenge Darwin’s account of evolutionary time as a ruthless, senseless process. In the first half of the century, Luciano argues, a wide variety of writers and lecturers understood grief asaway to access sacred,a reflective time that connected the grieving subject to the repetitive cycles of the organic and to offer protection from the linear, relentless, forward-moving temporality of national progress as well as from the impetuousness of sensation. Sensation“**signals a mode of intensified embodiment in which all times but the present fall away—a condition simultaneously desired, in its recollection of the infantile state, and feared, in its negation of social agency**”; by contrast, “a morally regulated sentimentality,” manifested particularly in the capacity of reflection, “properly disperses feeling across time.”Cope and the American School adapted sentimentalism’s function as a measured, reflective orientation of the civilized subjectin time into an evolutionary discourse that gave the civilized the ability to manage the future development of the race. In keeping with their political paradigm, this entailed reworking affective feeling as a sacred time *outside*the linear time line of national development into the means by whichthe organic body could be brought in synchrony with national and imperial progress. The American School drew on sentimentalism to assert Anglo-Saxons’ capacity to subjugate the recursive rhythms of organic time to the service of the linear progress of national development. In the post-Darwinian context, the sentimental premise that refined feeling enables the transcendence of the physical body promised Anglo-Saxons a correlated control over natural time both cyclical and linear.Denied the status of fellow subjects of the nineteenth century, racialized peoples were understood to be animated fossils of the evolutionary past. The“**great chain of feeling,**” in historian Martin Pernick’s apt phrase, hierarchized human groups on the basis of their assumed sensibility and extendedspatially to the expanding borders of the nationand temporally from the past to the future yet to come.The American School championed the cyclical theory of recapitulation, in which fetuses literally retrace the development of their ancestors in the womb, only fully reaching the evolutionary plane of their parents at puberty. Recapitulationists rearranged the spatial distinctions that polygenesis, as articulated by Agassiz and others in the American School of Ethnology, relied on to conceive of racial difference. Cope and Hyatt interpreted their collections of fossilized dinosaurs and cephalopods as evidence that different species exhibit parallel development, such that evolutionary change is best depicted not as a branching tree but as a common trunk that divides into multiple parallel lines of differing length. Frozen somewhere near the dawn of civilization, blacks, Native Americans, Asians, and other racial groups formed different stages of “the infancy of civilized man,” which nonetheless persisted into the present.They were the roots of humanity, the base from which the civilized had branched off and surpassed.The primitive would retrace the evolution of lizards and other animals in the womb: they would become human at birth but remain frozen in the same developmental state as their parents, even as their body seemingly matured. Biopolitics entails **the racialization of temporality**. In Foucault’s words, itis thenineteenth-century “recasting ofthe theme of racial confrontations. . . [within] the theory of evolutionism and the struggle for existence,” in whichsomepeoples now represent “the past of [the] race”that consolidates modern“**biologico-social racism**

#### Logistics is not built on black flesh or ontologically rigid – their heuristic cements nihilism and destroys the possibility for political participation, which cements the worse excesses of racial violence

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Ironically, however twisted a standard of measure, we might gauge how far we’ve come by the degree of doubt expressible toward the efficacy of voter registration and electoral politics, as have a couple of my fellow writers in this issue. Even though I regard this argumentative posture as a strategic error of near-fatal proportions, I think I understand how we got here: basically, there are two related, but contrastive, founding propositions on black life and thought in modernity that critics have consistently elaborated since “time immemorial,” and by that, I mean the time that the student of history marks down as the beginning of her sense of crisis that initiates “blackness” in the Western context; as I understand it, Afrocentric views, for instance, elide “blackness” and Africanity which concept is driven back into the ancient world so that transatlantic slavery—relatively recent in light of an ancient human past—is not the origin—or more precisely, the prime time— of black personality’s historical identity, but, rather, an interruption of it. The diasporic, or (for lack of a better word) creolized reading of blackness lends weight to the term itself, insofar as blackness on this view defines a new historical apprenticeship, kin to Africanness, but distinct from it in its particular and stressful formation, instaurated by the trade. One “becomes” black –neither a phylogeny nor an ontogeny—by virtue of his/her interpellation in total Western Economy. These portions of discursive content imply discrete spatiotemporal registers, as the putative subjects of each overlap, but are not entirely conformable (even if they look exactly alike), and there’s the rub.

In the former instance, one discovers as many occasions as possible to establish and sustain symbolic contact with an imagined past, long receded, so that emphasis comes to rest on the power and porosity of myth and its ceremonial/ritualistic determinations wherever possible. Whether the Afrocentric sense eventuates in a vision of strategic movement toward a putative origin (as in “return” narratives/actualities of black politics of the Nineteenth and Twentieth Centuries), or of ideological movement toward it (“ancestral” ceremonies, ritual celebrations), this reading seems to engender a politics that is cultural, that looks “otherworldly”—the place of the ego-ideal—in its valorized reference to an imagined ancestral field. We would anticipate that electoral politics in its uninspirational mundaneness might actually be beneath it. In the latter instance, focus comes to rest on the conditions that make blackness possible in the first place and what several diasporic thinkers, Frantz Fanon, prominent among them, describe as “disalienation,” or the process of undoing the deleterious effects of slavery and colonization; because the diasporic view installs the latter as efficient cause of historic black movement, its political projects are charged with a sense of urgency as they resonate the era of their appearance with unmistakable identitarian markings. David Walker’s, Anna Julia Cooper’s, and W.E.B.Du Bois’s respective discourse, for example, could never be mistaken for a different time/cultural period, which means that such discourses are organically linked to their own “now.” Consequently, the political protocols of a diasporic commitment tend to reflect the sense of crisis that characterizes blackness as an emergent category of human possibility. Because blackness in the diasporic reading runs parallel to modernity, blackness is cut away from the idea of Africa—perhaps we could say more precisely that the idea of Africa is bracketed in this ideological outline, rather than jettisoned as it might have been a century ago—as the idea of blackness itself assumes the name of a virtually absolute origin. If we think of these concurrent strands of ideas as postures, then we realize the extent to which they determine not only how one stands, but where, as well as why.

This enormous conceptual legacy, one way or another, accounts, I believe, for the lion’s share of African-American theoretical production and might be said to proffer a rich example of the problem of being/becoming and time. In its impressive variations and combinations, recombinations and iterations, black theory-making has engendered its fullest efflorescence in my view in the post-sixties period with regard to both thematic variedness and complexity and the democratic and demographic distribution of its practitioners; it is also true that any one of these postures and/or variations on it might evince at any given moment a kind of intellectual sclerosis which would induce in turn a conservative politics. If, for example, a theory governed by a diasporic view of black history from which to commence its narrative reifies slavery and colonization as inherent properties in a subject, then the theoretical posture no longer serves as an intellectual technology, or a heuristic device, but, rather, comes to advance an ontological valence. In my own work, for instance, I attempt to advance a theory of flesh/body as a strategy to differentiate historical positionalities in confrontation with the modern world. But if this idea has any usefulness, it proposes the theory as an opening into a closure; a torque that kicks off movement or rotation in static properties. But I should hope not to lose sight of the human potential that the subject of the flesh embodies; perhaps another way to say this is that the enfleshed subject inscribes an opening in a chain of necessity rather than a last word. The theory does not exhaust the subject that it would address, but attempts to highlight it. To hold to the view that the enfleshed subject is actually chattel or property—which we cannot say, insofar as we have merely established a subject possibility in this case—defeats the purpose of discriminating in the first place between a conceptual device on the one hand and a speaking (even if barred) subject on the other.

I have taken, then, the long way around in order to say that the ballot does not lose efficacy when it is wielded by black personality because the latter was once defined as anomie, as chattel. In other words, to premise the future of blackness on its past is to be mired in timelessness, which is precisely to be bereft of historicity, of differentiation, of progression. But moreover, it confuses a conceptual narrative, or a position in discourse, with an actual narrative that will always exceed it. To disparage the black vote is not a sophisticated, or radical, response to anything, but reverberates instead, without meaning to, we might suppose, a long-standing hatred of black people and their aspirations. To express doubt about the vote, especially this election season, in light of what we face now is beyond criticism: it is quite simply to embrace the inevitability of violence, and one should avoid flirtation with violence unless she is willing to put herself in its path. Anything less is an act of bad faith; I would go so far as to say that the failure to cast a vote at the coming midterms is an immoral act for at least two reasons that might go without saying, but bear repeating nonetheless: the meaning of suffrage for generations of African-Americans and the suffering that it has exacted over the decades and the certain danger that the current presidency and a treasonous, complicit Republican congressional majority pose to the United States and the world. Do we need to count the ways that we are doubtless threatened?

When I was a child, I not only spoke as one, but imagined like a child, too—a sauce pan, for instance, turned upside down made a really great hat—shining and irrepressible, cocked upside the head to the left, or the right; fabulous for a stately procession; the family’s beautiful mahogany console housed a radio with a green light in it, and if you squeezed yourself behind the device and examined the exposed radio tubes in it, you watched as they were suddenly dissolved in your mind’s eye into the skyline of a good-size city that you were taking in from a bird’s eye-view; if you stood a mop head up and drew a face on its handle, you had a pretty good doll for a day, especially if your father, or a sibling, whittled down the handle. In this world of discovery and surprise and everyday objects charged with magic, a word like “treason” signaled a remoteness light years away; in fact, it was a “school” word about as close to a little four- to seven -year old black girl’s reality as eighteenth-century images of white guys in tri-cornered hats, crossing the Delaware (wherever that was!), except that one of them was oddly named “Benedict Arnold,” who was not a very nice guy, we were told, and nowhere near “George Washington,” “who never told a lie.” Somebody cut down a cherry tree and, asked about it, ‘fessed up. (Or was that Abe Lincoln?) But this “treason” business started growing up, too, not unlike its young host body, as its next iteration was closer in both time and space to that of the school children—it was the Civil War and “seceding” states from the “Union.” Why would “they,” including the state where our young lady lived then and now, do that? Ah! And she learns that “history hurts.” And at that precise moment, one put away childish things, even though Emmett Till, my contemporary, was child enough. One day, long after, the end of a line in the presidential oath of office caught my attention, in fact, it quite astonished me—to defend the United States against “all enemies, foreign and domestic.” But is it possible for the “enemy” to be domestic? And what if it is? I thought I’d never live to see the day when I would have to ask myself that question and to wonder what the citizen’s duty might be in the realization that it is not only possible, but under certain circumstances, as appears to be the case at present, quite likely. And here we are, faced with the actual possibility now that the long-deferred democracy we have labored toward is poised to take a blow that could permanently end it. If voting could stave it off, who would refuse? Hold that thought.

#### Affect can’t explain political or social life

Megan **Boler 18** and Elizabeth Davis, Department of Social Justice Education, OISE/University of Toronto, May 2018, “The affective politics of the “post-truth” era: Feeling rules and networked subjectivity,” Emotion, Space and Society Volume 27, Pages 75-85

While the attention to affective attunement is **potentially useful**, in deploying a definition of affect as quantitative, pre-personal, non-conscious, and non-signifying, one is left with **myriad questions** about how particular emotions are **targeted**, **produced** and **manipulated** within the affective politics of digital media. Papacharissi characterizes affective transmission as follows: “So digital, among other media, invite and transmit affect but also sustain affective feedback loops that generate and reproduce affective patterns of relating to others that are further reproduced as affect — that is, intensity that has not yet been cognitively processed as feeling, emotion, or thought” (23). Following the popular reification of affect, Papacharissi sharply distinguishes affect from emotion (2015, 13). “Affect explains the intensity with which something is experienced; it refers to just that: intensity” (2015, 135). For her, affect is a central component of how stories are formed and circulated within media flows, and affect helps provide an index of how some stories end up being salient in social media, and thus potentially have more or less political impact. While this account of affect resonates prima facie with Hochschild's concept of “deep stories” and felt truths which shape the feeling rules we see defining partisan polarization, readers are **left wanting a full articulation** of the **significance** (rather than simply the **alleged presence**) of affect as it circulates in and through digital media. This reflects a **more widespread tendency** in much scholarship to invoke “affect” in Massumi's “autonomous” sense with **little exploration** of the **complex relational manifestations** of emotions.

Affect **all too often** becomes a **mystified idea** akin to force or energy and intimates an **abstract celebration** of the uncontainable:

Disorder, marginality, and anarchy present the habitat for affect, mainly because order, mainstreaming, and hierarchy afford form that compromises the futurity of affect. Because marginal spaces support the emergence of change, affect is **inherently political**, although it **does not conform** to the structures we symbolically internalize as political. Thus, per affect theory, empowerment lies in liminality, in pre-emergence and emergence, or at the point at which new formations of the political are in the process of being imagined but **not yet articulated**. The form of affective power is pre-actualized, networked, and of a liquid nature.(2015, 19)

“Affect” so understood **pales in analytical resonance** or **utility** in contrast with earlier feminist analyses of emotion, which, as in the bitterness example above, describe the **actual shape** and **flow** of social life as it is intersubjectively produced in **specific micro-** and **macro-political contexts** of power relations. The qualitative descriptions of “affect” in social media are conceptually overshadowed by the language of emotion — and yet emotions are presented as simply what people “express”, not a web of intersubjectively produced sociality (see, e.g., Papacharissi, 2015, 15, 22, 53–54). As a result, the account is able **only to suggest broad quantitative measures** of the rate and flow of retweets as exemplifying affect.10 Affect understood as “intensity” **all too often** gestures at something it **does not explain**, while using rhetorical strategies that **further mystify the term**.

#### Deliberative democracy is good

Richter '19 [Stephan; 12/10/19; publisher and editor-in-chief of The Globalist; "In defense of democracy," https://www.salon.com/2019/12/10/in-defense-of-democracy\_partner/]//GJ

A key reason why there is this growing unhappiness with the quality of government is that democracy now has a well-established track record.

After periods of great economic and social progress, progress is now plateauing, certainly pretty much anywhere in the Western/developed world. That plateauing is a natural development in highly advanced countries.

Yet, people’s expectations and aspirations remain high. They expect democracy “to deliver,” as if this were some kind of automatic mechanism. And as if people themselves didn’t have to play an active role in terms of adjusting to new circumstances.

Just blame democracy?

Of course, it is very convenient to blame democracy per se and especially the traditional parties. But this overlooks that some of our problems are now so complex that it is nearly impossible to propose solutions to them. First and foremost, this is apparent with regard to climate change.

You can take plastic bags away from people and plastic bottles, but it changes little to nothing in the broader scheme of things. It makes people’s lives more inconvenient, but changes nothing. Changing the sources of energy is easily said, but not done. Wind and solar alone cannot do it.

Politicians, like all humans, including scientists, make mistakes. And, if they are honest, they are really stumped and overwhelmed. But they have a hard time to change their standard tune of seeking to assuage voters and dangle semi-specific promises in front of them.

Intractable problems

Then, there is the ageing of many societies. How does one really deal with that? By creating massive poverty among the elderly? In a growing number of developed societies, there is a clear realization that, in line with growing life expectancies, people have to work until a later age to keep the social contract functioning.

Of course, this generally applicable idea does not really address the problems of the working class. Despite all the talk about living ever longer, working-class people have almost unchanged life expectancy compared to 30-40 years ago. Raising the working age for all would mean that they have even less time to enjoy the rest of their lives. Is that fair?

But even if that is acceptable to people, the next problem arises. At least in developed countries with a stable population level, there are few jobs for people over 55 of age. If we want people to work, one has to end (older) age discrimination.

The situation in the United States looks good in that regard. After all, the U.S. government has banned age discrimination. However, it cannot do anything about the fact that essentially nobody complies with the law. The U.S. has always had a strong orientation toward the “youthful,” never mind that they are also still in a lower income range.

Government as “Mr. Fix It”

Little wonder then that many people, for all sorts of reasons and out of lots of motivations, blame their government. Take the challenge of technology. There is the balance of digitalization of government and protecting your privacy, of preventing your data from being hacked by Russians.

What used to be balanced, even if sub-optimally efficient, now faces the threat of bringing down the entire system. The private sector does not know what to do about it, how can we expect this from government?

A well-targeted breach of digitized government can bring down the whole system. It can literally kill people. What nuclear weapons where once needed for — massive destruction — can now be achieved from a single computer terminal today. Should politicians just go full-throttle ignoring these serious threats? What if the horrific happens, who gets blamed?

As the challenges mushroom

It is easy to blame government for inaction, for incompetence, for bureaucracy, for the lack of new ideas and the lack of solutions to complex problems. Too easy.

People inside each nation tend to blame their government and its structure and deride it as incompetent. But is that a helpful approach? Are other nations doing it better?

Is France, with highly concentrated central government power, doing better a job? Is Russia with an autocrat doing better? Is China with a strong central government — with ever more advanced, but heavily human control oriented policies — doing better? And, owing to the extremely high level of divisiveness inside U.S. society, what about the failings of the United States in this list of comparisons?

The great danger, of course, for politicians and citizens alike is to begin comparing their own nation downwards. Saying that other countries are doing an even worse job may temporarily soothe the soul, but it offers no solution, not even the motivation to try to do better.

Back to the roots

In a way, we are back to the beginnings of democracy, when everything seemed so unclear, messy and complex.

We are, once again, approaching the point where we realize that freedom, self-determination and an open society are no mere figures of speech, to which they have largely devolved in recent decades. They are rather the key values that the people and our governments must protect.

Given the enormity of our challenges, government first and foremost should serve as protectors of these values. That sounds abstract, but is the basis for all progress.

Second, all we can realistically hope for in terms of our problems is that our governments prove to be good and cost-efficient administrators. The solutions to these problems may still be out of reach, but in fully open societies we may stand a better chance to find solutions over time.

Conclusion

Here is a useful test: If we were all taking a step back and asked ourselves what would we do if we were omnipotent with no checks or balances and could implement policies at will, what would we do? Would we know the answers to these complex questions? The answer is probably “no.”

That is a fundamental truth that has been greatly obscured over the course of recent decades when we first thought that democracy was an eternal forward-leading mechanism because we mistook material progress with political and societal progress.

And then, when that progress slowed greatly, and even when it was no longer really there, we kept denying that stark and frustrating new reality.

That is perhaps the key reason why everybody is now so frustrated with democracy and government.