## 1AC Berkeley Round 5

### 1AC: Plan

#### Plan - Private entities ought not appropriate lunar heritage sites in outer space

Harrington 19, Andrea J. "Preserving Humanity's Heritage in Space: Fifty Years after Apollo 11 and beyond." J. Air L. & Com. 84 (2019): 299. (Associate Professor and Director of the Schriever Space Scholars at USAF Air Command and Staff College)//Elmer

The issue of humanity’s cultural heritage in space has arisen as one of many unanswered questions in space law, with no international agreements specifically addressing it. With the beginning of the space age fifty-six years ago and a series of remarkable achievements in space exploration behind us, it is necessary to determine what should be done regarding the “artifacts” of this exploration. NASA has promulgated their recommendations for spacefaring entities with the goal of protecting the lunar artifacts left behind by the Apollo missions.8 These recommendations establish “keep-out zones” of up to a four kilometer diameter with the aim of protecting the artifacts, particularly from dangerous, fastmoving particles that arise as a result of craft landings.9 Experience has shown that even artifacts that are sheltered by craters can be significantly sandblasted and pitted as a result of the moving particles.10 These recommendations, supposedly drafted in conformity with the Outer Space Treaty, however, are completely nonbinding.11 Legislation that has passed the U.S. Senate and is under consideration by the House of Representatives as of July 2019 would make these recommendations binding on U.S. entities seeking to land on the Moon.12 Accidental damage from unrelated missions, however, is only one of many threats to space artifacts. With the impending return to the Moon, it is likely that individuals and corporations will be looking to turn a profit from space heritage, without concern for the protection of such heritage. Tourists may disrupt sites with careless expeditions and landing sites may be desecrated so that the items can be sold. A Russian Lunakhod lunar rover has already been sold at auction to a private party, though it has not yet been moved from its original position on the Moon.13 While national heritage legislation can protect space artifacts from citizens of their own countries, there is currently no effective means in the present space law regime by which a country can protect its heritage from other countries.14 Both California and New Mexico have added Tranquility Base to their list of protected heritage sites.15 However, this solution, and those proposed in the bill put forth to the U.S. House of Representatives, only serve to restrict the activities of a small subset of the potential visitors to the Moon. Though the Senate bill calls for the President to initiate negotiations for a binding international agreement, there is still a long road from this bill to a potential agreement.16 A solution is needed to prevent the damage, destruction, loss, or private appropriation of our cultural heritage in space.

#### We’ll defend NASA’s list of Lunar Heritage Sites – insert Map below.

JPL 13 12-13-2013 "Lunar Heritage Sites" <https://moon.nasa.gov/resources/53/lunar-heritage-sites/> (Jet Propulsion Laboratory at CalTech)//Elmer

A picture containing dome

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### 1AC: Lunar Heritage v3

#### The Advantage is Lunar Heritage:

#### Global Moon Rush by private actors is coming now.

Sample 19 Ian Sample 7-19-2019 “Apollo 11 site should be granted heritage status, says space agency boss” <https://www.theguardian.com/science/2019/jul/19/apollo-11-site-heritage-status-space-agency-moon> (PhD at Queens Mary College)//Elmer

But protecting lunar heritage may not be straightforward. On Earth, the United Nations Educational, Scientific and Cultural Organisation (Unesco) decides what deserves world heritage status from nominations sent by countries that claim ownership of the sites. Different rules apply in space. The UN’s outer space treaty, a keystone of space law, states that all countries are free to explore and use space, but warns it “is not subject to national appropriation by claim of sovereignty”. In other words, space is for all and owned by none. Wörner is not put off and sees no need for troublesome regulations. “My hope is that humanity is smart enough not to go back to this type of earthly protection. Just protect it. That’s enough. Just protect it and have everybody agree,” he said. A no-go zone of 50 metres around Tranquility base should do the job, he added. Martin Rees, the Cambridge cosmologist and astronomer royal, said there was a case for designating the sites so future generations and explorers were aware of their importance. “If there are any artefacts there, they shouldn’t be purloined,” he said. “Probably orbiting spacecraft will provide routine CCTV-style coverage which would prevent this from being done clandestinely.” Beyond the dust-covered hardware that stands motionless on the moon, Lord Rees suspects future activity could drive calls for broader lunar protection. The Apollo 17 astronaut and geologist Harrison Schmidt has advocated strip mining the moon for helium-3, a potential source of energy. The proposal, which Rees suggests has raised eyebrows in the community, could potentially provoke a backlash. “There might be pressure to preserve the more attractive moonscapes against such despoilation, and to try to enforce regulations as in the Antarctic,” he said. Fifty years on from Apollo 11, the moon is still a place to make statements. In January, the Chinese space agency became the first to land a probe on the far side. On Monday, India hopes to launch a robotic probe, the delayed Chandrayaan-2 lander that is bound for the unchartered lunar south pole. Far more is on the cards. Major space agencies, including ESA and Nasa, plan a “lunar gateway”, described by Wörner as a “bus stop to the moon and beyond”. His vision is for a “moon village”, but rather than a sprawl of domes, shops and a cosy pub, it is more an agreement between nations and industry to cooperate on lunar projects. The private sector is eager to be involved. Between now and 2024, at least five companies aim to launch lunar landers. In May, Nasa selected three companies to design, build and operate spacecraft that will ferry scientific experiments and technology packages to the moon. The coming flurry of activity may make protection more urgent. Michelle Hanlon, a space lawyer at the University of Mississippi, co-founded the non-profit organisation For all Moonkind to protect, preserve and memorialise human heritage on the moon. While she conceded that not all of the sites that bear evidence of human activity needed protection, she said many held invaluable scientific and archaeological data that we could not afford to lose. “These sites need to be protected from disruption if only for that reason,” she added. The protection should be far wider, and more formal, than Wörner calls for, Hanlon argues. “It is astounding to me that we wouldn’t protect the site of Luna 2, the very first object humans crashed on to another celestial body, and Luna 9, the very first object humans soft-landed on another celestial body,” she said. The Soviet Luna programme sent robotic craft to the moon between 1959 and 1976. “The director general has a much more optimistic view of human nature than I do,” Hanlon said. “I completely agree that the entities and nations headed back to the moon in the near future will take a commonsense approach and give due regard to the sites and artefacts. However, that is the near future. We have to be prepared for the company or nation that doesn’t care. Or worse, that seeks to return to the moon primarily to pillage for artefacts that will undoubtedly sell for tremendous amounts of money here on Earth.”

#### Destroys scientifically rich Tranquility base artifacts.

Fessl 19 Sophie Fessl 7-10-2019 “Should the Moon Landing Site Be a National Historic Landmark?” <https://daily.jstor.org/should-the-moon-landing-site-be-a-national-historic-landmark/> (PhD King’s College London, BA Oxford)//Elmer

When Neil Armstrong set foot on the moon on July 20, 1969, the pictures sent to Earth captured a historical moment: It was the first time that any human set foot on another body in our solar system. Fifty years later, experts are debating how to preserve humankind’s first steps beyond Earth. Could a National Park on the moon be the solution to saving Armstrong’s bootprints for future archaeologists? Flags, rovers, laser-reflecting mirrors, footprint—these are just a few of the dozens of artifacts and features that bear witness to our exploration of the moon. Archaeologists argue that these objects are a record to trace the development of humans in space. “Surely, those footprints are as important as those left by hominids at Laetoli, Tanzania, in the story of human development,” the anthropologist P.J. Capelotti wrote in Archaeology. While the oldest then known examples of hominins walking on two feet were cemented in ash 3.6 million years ago, “those at Tranquility Base could be swept away with a casual brush of a space tourist’s hand.” Fragile Traces Just how fragile humankind’s lunar traces are was seen already during Apollo 12. On November 19, 1969, Charles “Pete” Conrad and Alan Bean manually landed their lunar module in the moon’s Ocean of Storms, 200 meters from the unmanned probe Surveyor 3, which was left sitting on the moon’s surface two years earlier, in 1967. The next day, Conrad and Bean hopped to Surveyor 3. As they approached the spacecraft, they were surprised: The spacecraft, originally bright white, had turned light brown. It was covered in a fine layer of moon dust, likely kicked up by their landing. Harsh ultraviolet light has likely bleached the U.S. flag bright white. Without Apollo 12 upsetting the moon dust, Surveyor 3 would likely have remained stark white. Unlike Earth, the moon has no wind that carries away the dust, no rain to corrode materials, and no plate tectonic activity to pull sites on the surface back into the moon. But the moon’s thin atmosphere also means that solar wind particles bombard the lunar surface, and harsh ultraviolet light has likely bleached the U.S. flag bright white. The astronauts’ first bootprints will likely be on the moon for a long time, and will almost certainly still be there when humans next visit—unless, by tragic coincidence, a meteorite hits them first. Had LunaCorp not abandoned the idea in the early 2000s, the company’s plan to send a robot to visit the most famous sites of moon exploration could have done a lot of damage. And with Jeff Bezos’ recent unveiling of a mock-up of the lunar lander Blue Moon, it is only a matter of time before corporate adventurers and space tourists reach the moon. Historians and archaeologists are keen to avoid lunar looting. Roger Launius, senior curator of space history at the National Air and Space Museum in Washington, D.C., warned: “What we don’t want to happen is what happened in Antarctica at Scott’s hut. People took souvenirs, and nothing was done to try to preserve those until fairly late in the game.” On the other hand, there is a legitimate scientific interest in investigating how the equipment that’s on the moon was affected by a decades-long stay there.

#### Private entities are a unique threat---universal rules key.

Hertzfeld and Pace 13 (, H. and Pace, S., 2013. International Cooperation on Human Lunar Heritage. [online] Cpb-us-e1.wpmucdn.com. Available at: <https://cpb-us-e1.wpmucdn.com/blogs.gwu.edu/dist/7/314/files/2018/10/Hertzfeld-and-Pace-International-Cooperation-on-Human-Lunar-Heritage-t984sx.pdf> [Accessed 18 January 2022] Dr. Hertzfeld is an expert in the economic, legal, and policy issues of space and advanced technological development. Dr. Hertzfeld holds a B.A. from the University of Pennsylvania, an M.A. from Washington University, and a Ph.D. degree in economics from Temple University. He also holds a J.D. degree from the George Washington University and is a member of the Bar in Pennsylvania and the District of Columbia. Dr. Hertzfeld joined the Space Policy Institute in 1992. His research projects have included studies on the privatization of the Space Shuttle, the economic benefits of NASA R&D expenditures, and the socioeconomic impacts of earth observation technologies. He teaches a course in Space Law and a course in microeconomics through the Economics Department at G.W. Dr. Hertzfeld has served as a Senior Economist and Policy Analyst at both NASA and the National Science Foundation, and has been a consultant to many U.S. and international organizations, including a recent project on space applications with the OECD. He is the co-editor of Space Economics (AIAA 1992). Selected other publications include a study of the issues for privatizing the Space Shuttle (2000), an analysis of the value of information from better weather forecasts, an analysis of sovereignty and property rights published in the Journal of International Law (University of Chicago, 2005), and an economic analysis of the space launch vehicle industry (2005). Dr. Hertzfeld has also edited and prepared a new edition of the Study Guide and Case Book for Managerial Economics (Sixth Edition, W.W. Norton & Co.). Dr. Scott N. Pace is the Deputy Assistant to the President and Executive Secretary of the National Space Council (NSpC). He joined the NSpC in August 2017. From 2008-2017, he was the Director of the Space Policy Institute and a Professor of the Practice of International Affairs at George Washington University’s Elliott School of International Affairs. From 2005-2008, he served as the Associate Administrator for Program Analysis and Evaluation at NASA. Prior to NASA, he was the Assistant Director for Space and Aeronautics in the White House Office of Science and Technology Policy. From 1993-2000, he worked for the RAND Corporation’s Science and Technology Policy Institute, and from 1990-1993, he served as the Deputy Director and Acting Director of the Office of Space Commerce, in the Office of the Deputy Secretary of the Department of Commerce. In 1980, he received a Bachelor of Science degree in Physics from Harvey Mudd College; in 1982, Masters degrees in Aeronautics & Astronautics and Technology & Policy from the Massachusetts Institute of Technology; and in 1989, a Doctorate in Policy Analysis from the RAND Graduate School.)-rahulpenu

International Cooperation on Human Lunar Heritage The U.S. Apollo Space Program was a premier technological accomplishment of the 20th century. Preserving the six historic landing sites of the manned Apollo missions, as well as the mementos and equipment still on the Moon from those and other U.S. (e.g., Ranger and Surveyor) and Soviet Union (e.g., Luna) missions is important. Some of the instruments on the lunar surface are still active, monitored, and provide valuable scientifi c information. But recent government and **private**-**sector** **plans** to explore and potentially use lunar resources for commercial activity raise questions about the use of the Moon and potential accidental or purposeful threats to the historic sites and scientific equipment there. Although some steps to protect these sites have been proposed, we suggest a better way, drawing on international, not U.S. unilateral, recognition for the sites. Less than 2 years before the fi rst footsteps on the lunar surface on 20 July 1969 (see the image) , the United Nations Outer Space Treaty (OST) was drafted, ratifi ed, and came into force ( 1). Article II of the OST reinforced and formalized the international standard that outer space, the Moon, and other celestial bodies would not be subject to claims of sovereignty from any nation by any means, including appropriation. The OST prohibits ownership of territory or its appropriation by any state party to the treaty, which includes the United States, Russia, and 126 other nations. It does not prohibit the use of the Moon and its resources. In fact, the treaty emphasizes the importance of freedom of access to space for any nation and the importance of international cooperation in space exploration. These principles of the space treaties have enabled gains in science and technology and have contributed to international stability in space. New attention is being focused on the lunar surface. China has an active Moon exploration program and is considering sending astronauts (taikonauts) to the Moon. **Private** **firms** are contemplating robotic **missions** that could land in the vicinity of the historical sites of Apollo and other missions. Although we might assume the best of intentions for such missions, they could **irreparably** **disturb** the **traces** **of** the first **human** **visits** to another world. NASA has taken **steps** **to** **protect** the lunar landing **sites** and equipment and to initiate a process to create recognized norms of behavior. In July 2011, guidelines were issued for private companies competing in the Google Lunar X Prize that established detailed requirements for avoiding damage to U.S. government property on the Moon ( 2). H.R. 2617, The Apollo Lunar Landing Legacy Act, was introduced into the U.S. Congress on 8 July 2013 ( 3). In essence, it proposes to designate the Apollo landing sites and U.S. equipment on the Moon as a U.S. National Park with jurisdiction under the auspices of the U.S. Department of the Interior. Although the bill acknowledges treaty obligations of the United States, it would create, in effect, a unilateral U.S. action to control parts of the Moon. This would **create** a **direct** **conflict** **with** **i**nternational **law** and could be viewed as a **violation** **of** U.S. commitments under the **OST**. It would be an ineffective way of protecting historical U.S. sites, and it fails to address interests of other states that have visited and will likely visit the Moon. It is **legally** **flawed**, **unenforceable**, and **contradictory** **to** our national **space** **policy** and our international relations in space ( 4). There is a better way for the United States to protect its historic artifacts and equipment on the Moon. The fi rst step is to clearly distinguish between U.S. artifacts left on the Moon, such as fl ags and scientifi c equipment, and the territory they occupy. The second is to gain international, not unilateral, recognition for the sites upon which they rest. Aside from debris from crash landings (by Japan, India, China, and the European Space Agency), there are only two nations with “soft-landed” equipment on the lunar surface: the United States and Russia. China has plans to soft-land Chang’e 3 on the Moon in December 2013. All three nations (and any others wishing to participate) have much to gain and little or **nothing** **to** **lose** **from** a **multinational** **agreement** based on mutual respect and mutual protection of each other’s historical sites and equipment. Legal Issues Although ownership of planets, the Moon, and celestial bodies is prohibited, ownership of equipment launched into space remains with the nation or entity that launched the equipment, wherever that equipment is in the solar system. Under the OST, that nation is both responsible and liable for any harmful acts that equipment may create in space. There are no prescribed limits on time or the amount of damage a nation may have to pay. The U.S. government therefore still owns equipment it placed on the Moon. Ownership has the associated right of protecting the equipment, subject to using necessary and proportional means for protection. But, because no nation can claim ownership of the territory on which equipment rests, there is an open issue of how to control the spots on the Moon underneath that equipment, because the site is **integral** **to** the **historical** **signifi** **-** **cance**. In H.R. 2617, establishment of Apollo sites as a unit of the U.S. National Park System could be interpreted as a declaration of territorial sovereignty on the Moon, even though ensuing paragraphs specify the Park’s components as the “artifacts on the surface of the Moon” at those sites. This problem needs international legal clarifi cation, achievable via a formal agreement among those nations that have the technological ability to directly access the Moon ( 5). Section 6(a) raises another legal issue. The bill proposes that the Secretary of the Interior shall administer the park in accordance with laws generally applicable to U.S. National Parks. It also requires the Secretary to act in accordance with applicable international law and treaties. The U.S. National Park System Act states that the Parks are “managed for the benefi t and inspiration of all the people of the United States” ( 6). The OST clearly emphasizes that the exploration and use of space by nations is to benefi t all peoples. The laws and space policies of the United States have always emphasized peaceful uses of space and the benefi ts of space for humankind. It may not be possible to implement and execute provisions of this Bill without raising important and fundamental questions about these contradictions between the language of the treaty and the mandates of our National Park Service. A third legal issue is raised in section (6) (c)(2) that allows private donations and cooperative agreements to “provide visitors centers and administrative facilities within reasonable proximity to the Historical Park.” This **implies** **future** **private** **use** of the Moon **under** **rights** **granted** **by** the **U.S.** government. **Unilateral** **granting** **of** lunar territorial **rights** to private individuals and implicit sovereign protection of that territory **violates** the **OST**. Finally, section 8 of the bill requires the Secretary of the Interior to submit the Apollo 11 lunar landing site to the United Nations Educational, Scientifi c, and Cultural Organization (UNESCO) for designation as a World Heritage Site. This violates Article II of the OST. All current World Heritage Sites are located on sovereign territory of nations. The only exception is a separate treaty that allows UNESCO to designate underwater sites (such as sunken ships) as protected cultural sites ( 7). These designations are very limited, and although the convention has been ratifi ed by 43 nations, the United States, Russia, and China are not among them. Thus, any new treaty of this type specifi cally for outer space would have little chance of being ratifi ed by the major space-faring nations. A Proposal to Protect Lunar Sites Although a new U.N. treaty for space artifacts of signifi cant cultural and historic importance may be reasonable someday, this would start a very long process with unknown outcomes. Such a treaty could be delayed to a point beyond the time when nations and/or companies may be active on the Moon ( 8). Our suggested alternative is to create a bilateral agreement between the United States and Russia, offered as a multilateral agreement to other nations with artifacts on the Moon. This would be more legally expedient, politically sustainable, and would more likely meet and exceed the stated goals of the bill. It would also emphasize the important role of national laws to implement and enforce these international space agreements. **Any** **nation** **with** **assets** on the lunar surface will **endeavor** **to** **protect** those assets. This creates a situation where those nations have a **timely**, **current**, and **common** **interest** incorporating important implications for peaceful uses of outer space; **scientific** **research** and the advancement of **knowledge**; and **cultural** **and** **heritage** **value**, either presently or in the foreseeable future. The United States, Russia, and China all engage in multilateral cooperative space programs. They share many economic and trade dependencies adding to the international importance of promoting cooperation in space and commerce. In spite of today’s charged political environment, an **agreement** of the type we propose may still be possible to negotiate because it **focuses** **on** the **culture** **of** **space**, the use of space to benefit humankind, and the **archaeological** **record** of our civilization. It specifi cally would not touch sensitive issues of real property rights, export controls, human rights, or the weaponization of outer space. **Cooperation** on recognizing and protecting each other’s interests in historical sites and on equipment and artifacts also has no signifi cant security, prestige, or technological impediments. It reinforces the basic principles of the existing space treaties, avoids declarations of sovereignity on the Moon, and encourages multilateral cooperation resulting in a more stable and predictable environment for private activities on the Moon. The best mechanism for implementing a new agreement would be direct negotiations at highest levels of government in the United States, Russia, and China, with priority to include Russian sites in a proposal that protects U.S. sites. It could be included in meetings of heads of state of those nations, either jointly or sequentially among the three nations. Such an agreement could be executed in a relatively short period of time, setting precedents for peaceful and coordinated research, exploration, and exploitation of the Moon ( 9). An international agreement on lunar artifacts among the United States, Russia, and China would be a far superior and long-lasting solution than the unilateral U.S. proclamation in H.R. 2617. Enforcement of the agreement would be through each nation’s national laws, applying to those entities subject to the jurisdiction or control of the agreement members. Each nation’s property would be protected and preserved. Other nations should be free to join the agreement, and particularly encouraged to do so if they have the ability to access the Moon. An important result would be to develop a new level of trust among nations that could then lead to more **comprehensive** **future** cooperative agreements on **space**, **science**, **exploration**, **commerce**, **and** the use of the Moon and **other** **celestial** **bodies**.

#### Heritage Sites are critical for science research around Dust.

OSTP 18 Office of Science and Technology Policy March 2018 “PROTECTING & PRESERVING APOLLO PROGRAM LUNAR LANDING SITES & ARTIFACTS” (The Office of Science and Technology Policy is a department of the United States government, part of the Executive Office of the President, established by United States Congress on May 11, 1976, with a broad mandate to advise the President on the effects of science and technology on domestic and international affairs.)//Elmer

The Moon continues to hold great significance around the world. The successes of the Apollo missions still represent a profound human technological achievement almost 50 years later and continue to symbolize the pride of the only nation to send humans to an extraterrestrial body. The Apollo missions reflect the depth and scope of human imagination and the desire to push the boundaries of humankind’s existence. The Apollo landing sites and the accomplishments of our early space explorers energized our Nation's technological prowess, inspired generations of students, and greatly contributed to the worldwide scientific understanding of the Moon and our Solar System. Additionally, other countries have placed hardware on the Moon which undoubtedly has similar historic, cultural, and scientific value to their country and to humanity. Three Apollo sites remain scientifically active and all the landing sites provide the opportunity to learn about the changes associated with long-term exposure of human-created systems in the harsh lunar environment. These sites offer rich opportunities for biological, physical, and material sciences. Future visits to the Moon’s surface offer opportunities to study the effects of long-term exposure to the lunar environment on materials and articles, including food left behind, paint, nylon, rubber, and metals. Currently, very little data exist that describe what effect temperature extremes, lunar dust, micrometeoroids, solar radiation, etc. have on such man-made material, and no data exist for time frames approaching the five decades that have elapsed since the Apollo missions. While some of the hardware on the Moon was designed to remain operational for extended periods and successfully telemetered scientific data back to the Earth, much of what is there was designed only for use during the Apollo mission and then abandoned with no expectation of further survivability. How these artifacts and their constituent materials have survived and been altered while on the lunar surface is of great interest to engineers and scientists. The Apollo artifacts and the impact sites have the potential to provide unprecedented data if lunar missions to gather and not corrupt the data are developed. These data will be invaluable for helping to design future long-duration systems for operation on the lunar surface. NASA has formally evaluated the possible effects of the lunar environment and identified potential science opportunities. For example, using Apollo 15 as a representative landing site, the crew left 189 individually cataloged items on the lunar surface, including the descent stage of the Lunar Module, the Lunar Roving Vehicle, the Apollo Lunar Surface Experiments Package, and a wide variety of miscellaneous items that were offloaded by the astronauts to save weight prior to departure. The locations of many of these items are well documented, and numerous photographs are available to establish their appearance and condition at the time they were left behind.

#### Moon Dust Research key to Moon Basing.

Smith 19 Belinda Smith 7-18-2019 “Who protects Apollo sites when no-one owns the Moon?” <https://www.abc.net.au/news/science/2019-07-19/apollo-11-moon-landing-heritage-preservation-outer-space-treaty/11055458> (Strategic Communications Advisor at Department of Education and Training at University of Victoria)//Elmer

It's not just about history Alongside heritage value, the bits and pieces left on the Moon have enormous scientific significance. Take moon dust. It's a real problem for moon-bound equipment because it's made of fine, super sticky and highly abrasive grains, which have a habit of clogging instruments and spacesuits. But as Armstrong and Aldrin trotted across the surface, the footprints they left behind gave us valuable information into the properties of moon dust, Flinders University space archaeologist Alice Gorman said. "The ridges on the boots were meant to measure how far they sank into the dust. "Then they used the light contrast between the ridges to measure the reflectance properties of the dust." A boot print in grey dust. This iconic photo of Buzz Aldrin's footprint is also a science experiment. (Supplied: NASA) It's data like this that will help if we want a long-term base on the Moon — we need to know how our gear will stand up to lunar conditions. Apart from the sticky, gritty dust, the lunar surface is also peppered with meteorites and cosmic rays. So, Dr Gorman said, one of the very few reasons to revisit a moon site is to collect some of the equipment left behind and see how it fared. "What has happened to this material in 50 years of sitting on the lunar surface? "This is going to be really interesting scientific information because it will help planning for future missions and get an understanding of long-term conditions." And NASA has already done this. The Apollo 12 mission, which landed on the Moon four months after Apollo 11, collected parts from the 1967 Surveyor probe and brought them back to Earth. An astronaut standing next to a piece of equipment on the lunar surface Along with rocks and soil samples, Apollo 12 astronauts collected pieces of the Surveyor 3 probe for analysis back on Earth. (Supplied: NASA) Another reason to preserve the equipment left on the Moon is to prove we really went there, Professor Capelotti said. "There's a lot of people out there who still don't believe it happened. "The stuff on the Moon is a testament to what we did and when we did it."

#### Scenario 1 – Warming:

#### Lunar observatory solves warming adaptation.

Ding et al. 17 (, Y., Liu, G. and Guo, H., 2017. Moon-based Earth observation: scientific concept and potential applications. [online] Volume 11, 2018. Available at: <https://www.tandfonline.com/doi/full/10.1080/17538947.2017.1356879> [Accessed 22 January 2022] Yixing Ding - Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, People’s Republic of China Guang Liu - Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, People’s Republic of China Huadong Guo - Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, People’s Republic of China.)-rahulpenu

4. Scientific goal of moon-based earth observation A basic question for moon-based Earth observation is, ‘What to see?’ According to the characteristics of moon-based Earth observation, the phenomena suitable for Moon-based Earth observation may have at least one of the following features: long-lasting, related to Sun–Earth–Moon motion, requires stable baseline observation, large-scale and describes multiple parameters. In the following sections, we will present several observation objectives to discuss in detail. 4.1. Solid earth dynamics Solid Earth tides, continental plate movement and glacier isostatic adjustment (GIA) are three typical large-scale solid Earth movements (Jiang et al. 2016), the measurement of which is a basic task of geodesy. For a uniform layered Earth, accurately predicting tidal movement can be done theoretically, but complex ocean tides and the inelasticity and heterogeneity of Earth’s interior material make the solid tide of the real Earth difficult to research theoretically. For GIA studies, prior knowledge about ancient ice cover evolution and a large amount of observational data are needed. Plate tectonics theory is a quantitative description of Earth plate movement (Ni et al. 2016). It may well explain the movement of most oceanic plates, but still have some problems to explain the mechanism of strong continental earthquakes, large-scale continental deformation, as well as the movements of other oceanic plates (Bird 2003). Accurately **measuring** solid **Earth** **dynamics** is **beneficial** **to** **understanding** solid Earth **tides**, **continental** **plate** **movement** and **GIA**, and provides further support for geodynamics and seismology. Devices such as a superconducting gravimeter and global navigation satellite system are currently used to measure small deformations of solid Earth, but these point-by-point methods are spatially limited to certain regions. Spaceborne InSAR measures deformation continuously, but the swath is not wide enough for mapping large-scale solid Earth movement. The Moon is a vast and stable platform that can provide sufficiently long and stable baseline interferometry. Its movement is easier to predict and the time interval of repeat-pass interferometry could be reduced to one day (Fornaro et al. 2010). In addition, the Moon is one of the main sources of tides on the Earth; so if we compare two measurements at different times, the lunar tide portion can be subtracted, leaving only the solar tide portion. After proper processing, it may help us learn more about the interior structure of Earth’s crust. To measure the large-scale deformation, a Moon-based repeat-pass InSAR system needs to be carefully designed. Except for the general SAR parameters, the critical baseline is a key factor that impacts its performance. The critical baseline Bc leading to a complete spatial decorrelation is given by Bc = BlDem tan ui c . (7) In this equation, the incidence angle ui is related to the observational geometry, while l and B are optional. When the bandwidth is 100 MHz and the incidence angle is 25°, the critical baselines are 14,000, 3300 and 1770 km at the L-band, C-band and X-band, respectively. In order to keep the correlation between two repeat passes, a practical baseline must be smaller than Bc. Therefore, from a practical point of view, the L-band is better than the C-band or X-band. Figure 4 shows the simulation results of one-day interval interferometry, but the side-looking constraints are not involved. In this case, the temporal decorrelation is highly reduced. It is obvious that the interferometric area is larger in the L-band than in X-band. Meanwhile, when the declination of the Moon is near the extremes, the interferometric area becomes larger. When the declination of the Moon is near the equatorial plane, one-day interval repeat-pass interferometry is not feasible, but a half month or one month interval repeat-pass interferometry is available. The magnitude of the solid Earth motion is not large. For example, the typical solid Earth tide amplitude is dozens of centimetres in one day. A resolution of hundreds of metres or even coarser will be enough if the wave is stably scattered. 4.2. Energy budget of earth Fundamentally, **climate** **change** **depends** **on** Earth’s **radiation** **balance**. **Observation** **of** both the solar **radiation** **and** Earth’s **reflection** and emission will **depend** **on** **accurate** **measurement** with space technology. Since the late 1970s, the United States and Europe have launched a number of missions to measure solar and terrestrial radiation, such as NASA’s Active Cavity Radiometer Irradiance Monitor Series programme (ACRIM1, 1980–1989; ACRIM2, 1991–2001; ACRIM3, 2000–present), Earth Radiation Budget Experiment (ERBE, 1984–1994), Clouds and Earth’s Radiant Energy System (CERES, 1997–present), Solar Radiation and Climate Experiment (SORCE, 2003–present) and the French Megha-Tropiques satellite on the Scanner for Radiation Budget (ScaRaB, 2011–present). These missions have greatly improved our understanding of Earth’s energy system. The Deep Space Climate Observatory (DSCOVR), placed at the earth–Sun first Lagrangian point, has been designed to measure the outgoing radiation of the sunlit Earth disk with a constant look angle. But in the outgoing radiation, the reflected shortwave **radiation** is **highly** **affected** **by** **albedo** **and** **atmospheric** **conditions**, showing obvious anisotropy. **Lack** **of** **sampling** in space and time is **vulnerable** **to** **uncertainties**. The **lunar** **observatory** **provides** **large**-**scale** **observation** **with** continuously **changing** **angles**, enabling it to calibrate the **data** of satellites in different orbits at different times. Its most important property is that it can provide a **very** **long**-**term** time series from a single orbit platform. In a year, the time series covers all local times, all seasons (different weather pattern) and all Earth phases for all underlying surfaces (Pallé and Goode 2009; Karalidi et al. 2012). The diversity of the **surface**-**weatherphase** combination is beneficial to improving the quality of global energy budget data and to the study of regional energy redistribution and its multi-layer coupling effects. The Moon-based data will also provide a direct connection between the data from space technology and the data from ground-based earthshine measurement series, which span almost one hundred years. The system design can consult the DSCOVR satellite, a radiometer measuring irradiance of the Earth phase and an imaging camera taking images of the Earth phase for various Earth sciences purposes. In order to take into account the needs of observing the Earth’s environmental elements, 1 km spatial resolution and 20–30 channels of the camera are suggested. 4.3. Earth’s environmental elements Vegetation is an important part of the global carbon pool and a key element of global carbon cycle. Most vegetation is distributed in middle- and low-latitude regions. A Moon-based optical camera can image global **vegetation** almost every day. SAR maps not only the horizontal distribution of vegetation, but also extracts forest morphological structure through tomography. The Moon provides multi-baseline **accessibility** within a single pass to eliminate the tomographic temporal decorrelation, but the imaging temporal decorrelation within a long synthetic aperture time hampers the focusing of forest. Therefore, to validate the feasibility of Moon-based **3D** **mapping** of forest, more imaging methods for unstable scatterer, for example, the time reversal imaging method (Jin and Moura 2007), need to be tested and new methods are also expected. Glaciers are sensitive variables of climate change. The monitoring of glacier area, surface velocity and mass balance plays an important role in understanding the status of glaciers and their response to global change. Remote sensing techniques, such as optical sensors, SAR and altimeter data, provide regular observations of key glacial parameters. A lunar platform would provide continuous three- or four-day temporal coverage per month at the polar regions, but the observation incidence angle would typically be larger than 40° (see Figure 5) due to the relatively small inclination angle of the lunar orbit. For the High Asia area, the average coverage is about 4 h per day with proper incidence angle. The challenges may be the cost of high-resolution mapping for the optical sensor, and the layover problem (Tilley and Bonwit 1989) in heavy gradient area for SAR. Moon-based altimetry faces the same problems as LiDAR mentioned before, and is not recommended. An **atmospheric** **observatory** on the Moon can be used to evaluate the cloud fraction in an unambiguous manner, **determine** the **composition** in terms **of** the major **trace** **gas** and aerosols (Hamill 2016), and shed light on the relationship between lunar phases and **cloudiness** or **precipitation**. Particularly, the Moon offers a good place for **occultation** observation, which means observing the light or microwave changes emitted by stars or satellites when they are obstructed by atmosphere around the Earth. The Global Ozone Monitoring by Occultation of Stars (GOMOS) instrument on board the Envisat satellite is a typical system using the stellar occultation measurement principle in monitoring ozone and other trace gases in Earth’s stratosphere (Kyrola et al. 2004). Moon-based occultation was proposed in Link (1969), and was considered promising in Moon-based Earth atmosphere monitoring (Hamill 2007, 2016; Guo et al. 2014). The advantage of Moon-based occultation is that a star descends several times slower through the atmosphere than when viewed from a LEO satellite. This helps by increasing the SNR and resolution to some extent, but the practical performance also relies on the system design and the probability of finding an appropriate occultation geometry. 4.4. Earth-space environment Observing the environment of outer space surrounding Earth requires much larger FOV than only observing the solid Earth. The Moon is an ideal place to monitor the interaction between the solar wind and the magnetosphere. Moon-based observation combined with high near-polar Earth orbit or Molniya orbit observations can help us construct the three-dimensional structure of the magnetosphere by X-ray and EUV remote imaging. Images in all meridian planes of the whole plasma layer have already been captured by the EUV camera on the Chang’e 3 lander. Some initial results reflect the basic features of the plasmasphere, and also verified the accessibility of high-quality data of magnetosphere from the Moon (Feng et al. 2014). 5. Conclusion In this paper, we propose the Moon as a platform for Earth observation with long-term, dynamic capabilities, mainly focusing on large-scale geoscience phenomena. The characteristics of a lunar platform, the sensors and the scientific objectives of Moon-based Earth observation are discussed in detail. A lunar platform could observe Earth in quite a different way, and give a long-lasting disk view, a stable baseline and a unique perspective. The proposed sensors include some optical sensors and SAR. LiDAR, altimeters and scatterometers may not be functional on the lunar surface mainly because of the long viewing distance, and Moon-based radiometers may not be necessary if spaceborne radiometers are effective enough. Though the cost is not discussed in this paper, a Moon-based SAR would be extremely expensive and face too many specific technical difficulties to be implemented at the present time. On the contrary, passive optical sensors, such as spectrographs and panchromatic cameras, are much easier to realize. The scientific objectives of Moon-based Earth observation include measuring solid Earth dynamics and the global energy budget, and monitoring Earth’s environment and the surrounding environment of outer space. Moon-based Earth observation will be effective in measuring solid Earth tides, detecting outgoing radiation, and monitoring the magnetosphere and some of Earth’s environmental elements. Finally, we suggest that numerical simulations are indispensable to validate the proposals and to address specific problems.

#### Adaptation solves Climate Change’s worst effects – it’s the Silver Bullet.

Rood and Gibbons 21 Richard B. Rood and Elizabeth Gibbons 9-11-2021 "After a summer of weather horrors, adapting to climate change is an imperative" <https://archive.is/VKac8#selection-391.0-413.1> (Richard B. (Ricky) Rood is a professor of climate and space sciences and engineering at the University of Michigan. Elizabeth (Beth) Gibbons is executive director of the American Society of Adaptation Professionals.)//Elmer

This summer, the extraordinary heat in the Pacific Northwest, floods across the Northern Hemisphere and Hurricane Ida’s swath across the country have awakened more people to the dangers of climate change. As professionals working on climate change, we receive many requests for comments and interviews. More telling, perhaps, have been panic-tinged personal letters from family and friends as well as colleagues working in the field awakening to the real-world consequences of our warming climate. Public messaging on climate change is dominated by the discussion of reducing carbon dioxide emissions to limit the warming and to stop the “worst effects” of climate change. This is the mitigation of global warming. Headlines range from declarations of climate despair to the measured voices of those who insist that there is still the time and wherewithal to limit warming to the goals aspired to by the United Nations. Amid this cacophony of mitigation panic and sought-after patience is another discussion that has been going on for more than a decade. Namely, that we are not likely to meet emission-reduction goals such as those of the Paris agreement. This is complemented by the fact that we live in a rapidly changing climate, rapid change will continue, and we are not going back to the climate of our childhoods. When we consider how we will address our climate future, it is worth considering our past behavior and choices. We have had the ability and the roadmap to make major strides in reducing carbon dioxide emissions and mitigating climate change for many years. In many cases, these mitigation tactics are “no regrets,” with very quick monetary payback for expenditures — the insulation of houses and choosing fuel-efficient vehicles, for example. Yet we have not taken these steps at the scales that are required for effective intervention. Mitigation is one response, but adaptation can be framed as the other response. Adaptation is responding to the effects of warming or perhaps coping with the consequences of the warming Earth. With the public conversation focusing overwhelmingly on mitigation, adaptation has been a neglected topic. Compared with mitigation, adaptation is relatively easy. Effective mitigation requires changing human behavior, ingrained geopolitical and economic power structures, and built infrastructure on a global scale. It requires convincing people to invest for the common good of other people, often decades into the future. At its simplest, adaptation can be carried out by an individual. You can sell the house next to the ocean and move to northern Michigan. You can reinforce your roof and put your oceanside house on stilts. There is a concrete value proposition. Although adaptation can be carried out by individuals, it is better and certainly more equitable to plan on the larger scales of a community, a city or a region. As the geographical scale increases and more individuals, organizations and local governments are involved, it does get more difficult. However, the threats to life, property and the local environment often serve as motivation to challenge the barriers of cooperation and shared beneficial outcomes. For example, a region threatened by rising seas is motivated to come together to find solution strategies. Indeed such efforts are underway, for example, in the Southeast Florida climate compact, the Puget Sound climate collaborative, and efforts across Southeast Virginia’s Hampton Roads region. When a region successfully implements adaptation plans, communities are likely to have wins when the next storm is not as destructive and costly. These wins help people cope with global warming and realize some ability to take control of what has been often stated as an existential threat. There have been those calling for adaptation policy for many years. However, it has been difficult to get adaptation on the policy agenda. This is ascribed to many reasons, including the persistent, spurious argument that if we talk of adaptation, then we will decide that we do not need to mitigate our emissions. However, we are at the point that, even if we were to meet all of the emission reduction goals of the United Nations’ Paris agreement, adaptation will still be required. In the end, the most important aspect of adaptation is fundamentally human. If individuals and communities can see adaptation as a way of sustaining their well-being in the face of rapidly changing weather, then it is a step of moving past the narrative that we must, between now and 2030, solve an existential threat to our survival. We can see successful adaptation strategies spreading, scaling, and bringing planetary warming into the mind-set and the behavior of more and more people. We must entrain dealing with the weather of a warming Earth into all that we do. And that, we assert, will make the need for mitigation more real and urgent.

#### That causes extinction.

Sears 21 (, N., 2021. Great Powers, Polarity, and Existential Threats to Humanity: An Analysis of the Distribution of the Forces of Total Destruction in International Security. [online] ResearchGate. Available at: <https://www.researchgate.net/publication/350500094> [Accessed 22 November 2021] Nathan Alexander Sears is a PhD Candidate in Political Science at The University of Toronto. Before beginning his PhD, he was a Professor of International Relations at the Universidad de Las Américas, Quito. His research focuses on international security and the existential threats to humanity posed by nuclear weapons, climate change, biotechnology, and artificial intelligence. His PhD dissertation is entitled, “International Politics in the Age of Existential Threats”)-re-cut rahulpenu

Climate Change Humanity faces existential risks from the large-scale destruction of Earth’s natural environment making the planet less hospitable for humankind (Wallace-Wells 2019). The decline of some of Earth’s natural systems may already exceed the “planetary boundaries” that represent a “safe operating space for humanity” (Rockstrom et al. 2009). Humanity has become one of the driving forces behind Earth’s climate system (Crutzen 2002). The major anthropogenic drivers of climate change are the burning of fossil fuels (e.g., coal, oil, and gas), combined with the degradation of Earth’s natural systems for absorbing carbon dioxide, such as deforestation for agriculture (e.g., livestock and monocultures) and resource extraction (e.g., mining and oil), and the warming of the oceans (Kump et al. 2003). While humanity has influenced Earth’s climate since at least the Industrial Revolution, the dramatic increase in greenhouse gas emissions since the mid-twentieth century—the “Great Acceleration” (Steffen et al. 2007; 2015; McNeill & Engelke 2016)— is responsible for contemporary climate change, which has reached approximately 1°C above preindustrial levels (IPCC 2018). Climate change could become an existential threat to humanity if the planet**’s** climate reaches a “Hothouse Earth” state (Ripple et al. 2020). What are the dangers? There are two mechanisms of climate change that threaten humankind. The direct threat is extreme heat. While human societies possesses some capacity for adaptation and resilience to climate change, the physiological response of humans to heat stress imposes physical limits—with a hard limit at roughly 35°C wet-bulb temperature (Sherwood et al. 2010). A rise in global average temperatures by 3–4°C would increase the risk of heat stress, while 7°C could render some regions uninhabitable, and 11–12°C would leave much of the planet too hot for human habitation (Sherwood et al. 2010). The indirect effects of climate change could include, inter alia, rising sea levels affecting coastal regions (e.g., Miami and Shanghai), or even swallowing entire countries (e.g., Bangladesh and the Maldives); extreme and unpredictable weather and natural disasters (e.g., hurricanes and forest fires); environmental pressures on water and food scarcity (e.g., droughts from less-dispersed rainfall, and lower wheat-yields at higher temperatures); the possible inception of new bacteria and viruses; and, of course, large-scale human migration (World Bank 2012; Wallace-Well 2019; Richards, Lupton & Allywood 2001). While it is difficult to determine the existential implications of extreme environmental conditions, there are historic precedents for the collapse of human societies under environmental pressures (Diamond 2005). Earth’s “big five” mass extinction events have been linked to dramatic shifts in Earth’s climate (Ward 2008; Payne & Clapham 2012; Kolbert 2014; Brannen 2017), and a Hothouse Earth climate would represent terra incognita for humanity. Thus, the assumption here is that a Hothouse Earth climate could pose an existential threat to the habitability of the planet for humanity (Steffen et al. 2018., 5). At what point could climate change cross the threshold of an existential threat to humankind? The complexity of Earth’s natural systems makes it extremely difficult to give a precise figure (Rockstrom et al. 2009; ). However, much of the concern about climate change is over the danger of crossing “tipping points,” whereby positive feedback loops in Earth’s climate system could lead to potentially irreversible and self-reinforcing “runaway” climate change. For example, the melting of Arctic “permafrost” could produce additional warming, as glacial retreat reduces the refractory effect of the ice and releases huge quantities of methane currently trapped beneath it. A recent study suggests that a “planetary threshold” could exist at global average temperature of 2°C above preindustrial levels (Steffen et al. 2018; also IPCC 2018). Therefore, the analysis here takes the 2°C rise in global average temperatures as representing the lower-boundary of an existential threat to humanity, with higher temperatures increasing the risk of runaway climate change leading to a Hothouse Earth. The Paris Agreement on Climate Change set the goal of limiting the increase in global average temperatures to “well below” 2°C and to pursue efforts to limit the increase to 1.5°C. If the Paris Agreement goals are met, then nations would likely keep climate change below the threshold of an existential threat to humanity. According to Climate Action Tracker (2020), however, current policies of states are expected to produce global average temperatures of 2.9°C above preindustrial levels by 2100 (range between +2.1 and +3.9°C), while if states succeed in meeting their pledges and targets, global average temperatures are still projected to increase by 2.6°C (range between +2.1 and +3.3°C). Thus, while the Paris Agreements sets a goal 6 that would reduce the existential risk of climate change, the actual policies of states could easily cross the threshold that would constitute an existential threat to humanity (CAT 2020).

### 1AC: Framework

#### The standard is maximizing expected well-being, or hedonistic act utilitarianism.

#### 1] Neuroscience- pleasure and pain *are* intrinsic value and disvalue – everything else regresses.

Blum et al. 18 [Kenneth Blum, 1Department of Psychiatry, Boonshoft School of Medicine, Dayton VA Medical Center, Wright State University, Dayton, OH, USA 2Department of Psychiatry, McKnight Brain Institute, University of Florida College of Medicine, Gainesville, FL, USA 3Department of Psychiatry and Behavioral Sciences, Keck Medicine University of Southern California, Los Angeles, CA, USA 4Division of Applied Clinical Research & Education, Dominion Diagnostics, LLC, North Kingstown, RI, USA 5Department of Precision Medicine, Geneus Health LLC, San Antonio, TX, USA 6Department of Addiction Research & Therapy, Nupathways Inc., Innsbrook, MO, USA 7Department of Clinical Neurology, Path Foundation, New York, NY, USA 8Division of Neuroscience-Based Addiction Therapy, The Shores Treatment & Recovery Center, Port Saint Lucie, FL, USA 9Institute of Psychology, Eötvös Loránd University, Budapest, Hungary 10Division of Addiction Research, Dominion Diagnostics, LLC. North Kingston, RI, USA 11Victory Nutrition International, Lederach, PA., USA 12National Human Genome Center at Howard University, Washington, DC., USA, Marjorie Gondré-Lewis, 12National Human Genome Center at Howard University, Washington, DC., USA 13Departments of Anatomy and Psychiatry, Howard University College of Medicine, Washington, DC US, Bruce Steinberg, 4Division of Applied Clinical Research & Education, Dominion Diagnostics, LLC, North Kingstown, RI, USA, Igor Elman, 15Department Psychiatry, Cooper University School of Medicine, Camden, NJ, USA, David Baron, 3Department of Psychiatry and Behavioral Sciences, Keck Medicine University of Southern California, Los Angeles, CA, USA, Edward J Modestino, 14Department of Psychology, Curry College, Milton, MA, USA, Rajendra D Badgaiyan, 15Department Psychiatry, Cooper University School of Medicine, Camden, NJ, USA, Mark S Gold 16Department of Psychiatry, Washington University, St. Louis, MO, USA, “Our evolved unique pleasure circuit makes humans different from apes: Reconsideration of data derived from animal studies”, U.S. Department of Veterans Affairs, 28 February 2018, accessed: 19 August 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6446569/>] R.S.

**Pleasure** is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10]. Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14]. Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain’s pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals. Evolutionary theories of pleasure: The love connection BO:D Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us “what we are,” i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it. It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring. Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding. There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the “Brain Reward Cascade” (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall health. Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage. Finding happiness is different between apes and humans As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure. Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even produce **the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered. Desire and reward centers It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called “REWARD” involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation. In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the “Feel Good” response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term “Reward Deficiency Syndrome” (RDS) to describe genetic and epigenetic induced hypodopaminergia in the “Brain Reward Cascade” that contribute to addiction and compulsive behaviors [3,6,41]. Furthermore, ordinary “liking” of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for “sweet”; and in Greek, hodone is the term for “pleasure.” Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42]. Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans. In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: “liking,” “learning,” and “wanting” [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or “wanting” hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45]. Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic “high” that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between “stages,” and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations. Over many years the controversy of dopamine involvement in especially “pleasure” has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50] In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders. In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: “Humans have evolved a dopamine system that is different than the one in chimpanzees.” This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: “It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction).” Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain’s reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson’s, schizophrenia and spectrum disorders such as autism and addiction or RDS. Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans’ ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual’s physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

#### 2] Actor spec —governments must use util because they don’t have intentions and are constantly dealing with tradeoffs—outweighs since different agents have different obligations—takes out calc indicts since they are empirically denied.

#### 3] No intent-foresight distinction – if I foresee a consequence, then it becomes part of my deliberation since its intrinsic to my action

#### Impact calc –

#### 1] Extinction outweighs –

#### A] Reversibility- it forecloses the alternative because we can’t improve society if we are all dead

#### B] Structural violence- death causes suffering because people can’t get access to resources and basic necessities

#### C] Objectivity- body count is the most objective way to calculate impacts because comparing suffering is unethical

#### D] Uncertainty- if we’re unsure about which interpretation of the world is true, we should preserve the world to keep debating about it

### 1AC: Method

#### Evolution proves our offensive realism

Johnson and Thayer 16 – Dominic D. P. Johnson, D.Phil., Ph.D.\* and Bradley A. Thayer, Ph.D., “The evolution of offensive realism Survival under anarchy from the Pleistocene to the present,” https://www.cambridge.org/core/services/aop-cambridge-core/content/view/56B778004187F70B8E59609BE7FEE7A4/S073093841600006Xa.pdf/div-class-title-the-evolution-of-offensive-realism-div.pdf

Few principles unite the discipline of international relations, but one exception is anarchy—the absence of government in international politics. Anarchy is, ironically, the ‘‘ordering’’ principle of the global state system and the starting point for most major theories of international politics, such as neoliberalism and neorealism.42,43,44,45 Other theoretical approaches, such as constructivism, also acknowledge the impact of anarchy, even if only to consider why anarchy occurs and how it can be circumvented.46,47 Indeed, the anarchy concept is so profound that it defines and divides the discipline of political science into international politics (politics under conditions of anarchy) and domestic politics (politics under conditions of hierarchy, or government). Given the prominence of the concept in present-day international relations theory, it is striking that anarchy only took hold as a central feature of scholarship in recent decades, since the publication of Kenneth Waltz’s Theory of International Politics in 1979. In fact, however, **anarchy has been a constant feature of the entire multimillion year history of the human lineage (and indeed the 3.5 billion–year history of the evolution of all life on Earth before that). It is not just that we lack a global Leviathan today; humans never had such a luxury. The fact that human evolution occurred under conditions of anarchy, that we evolved as hunter-gatherers in an ecological setting of predation, resource competition, and intergroup conflict, and that humans have been subject to natural selection** for millions of years **has profound consequences for understanding human behavior**, not least how humans perceive and act toward others. Scholars often argue over whether historically humans experienced a Hobbesian ‘‘state of nature,’’ but—whatever the outcome of that debate—it is certainly a much closer approximation to the prehistoric environment in which human brains and behavior evolved. **This legacy heavily influences our decision-making and behavior today, even—perhaps especially—in the anarchy of international politics**. We argue that **evolution under conditions of anarchy has predisposed human nature toward the behaviors predicted by offensive realism: Humans**, particularly men, **are strongly self-interested, often fear other groups, and seek more resources, more power, and more influence** (as we explain in full later). **These strategies** are not unique to humans and, in fact, **characterize a much broader trend in behavior among mammals as a whole—especially primates**—as well as many other major vertebrate groups, including birds, fish, and reptiles. **This recurrence of behavioral patterns** across different taxonomic groups **suggests that the behaviors characterized by offensive realism have broad and deep evolutionary roots**. This perspective does not deny the importance of institutions, norms, and governance in international politics. On the contrary, it provides or adds to the reasons why we demand and need them, and indeed why they are so hard to establish and maintain. Until recently, **international relations theorists rarely used insights from the life sciences to inform their understanding of human behavior**. However, **rapid advances in the life sciences offer increasing theoretical and empirical challenges to scholars in** the social sciences in general and **international relations** in particular, who are therefore under increasing pressure to address and integrate this knowledge rather than to suppress or ignore it. Whatever one’s personal views on evolution, **the time has come to explore the implications of evolutionary theory for mainstream theories of international relations**. **The most obvious challenge that evolutionary theory presents to international relations concerns our understanding of human nature**. Theories purporting to explain human behavior make explicit or implicit assumptions about preferences and motivations, and mainstream theories in international politics are no exception. Many **criticisms of international relations theories focus on these unsubstantiated or contested assumptions about underlying human nature. The parsimony of general theories depends on how well they explain phenomena across space and time**; in other words, the more closely they coincide with empirical observations across cultures and throughout history. The most enduring theories of international relations, therefore, will be ones that are able to incorporate (or at least do not run against the grain of) evolutionary theory. Although Thomas Hobbes claimed to have deduced Leviathan scientifically from ‘‘motion’’ and the physical senses, he was writing two hundred years before Darwin and so had no understanding of evolution. International relations scholars have tended to claim to deduce their own theories from Hobbes, or subsequent philosophers who followed him, and we suggest it is time to revisit the idea of foundational scientific principles. **Starting with biology, or with human evolutionary history, has never been typical in international relations scholarship**, but this approach is now less exotic than it once seemed as innovators in a range of social sciences, including economics, psychology, sociology, and political science, pursue this line of inquiry. **International relations stands to gain from** similar **interdisciplinary insights**. At the dawn of the 21st century, an era that will be dominated by science at least as much as philosophy, **we have the opportunity to move away from untested assumptions about human nature. Instead, we can make more concrete predictions about how humans tend to think and act in different conditions, based on new scientific knowledge about human cognition** and behavior, **and in particular a greater understanding of the social and ecological context in which human brains and behaviors evolved**. But what was that context?

#### Empirical approaches to international relations and nuclear warfare are epistemologically valid — prefer quantitative analyses.

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The questions we ask in our articles require a more comprehensive approach to data collection. By collecting information about dozens (or hundreds) of cases rather than just one or two, we can gain insights into whether the patterns we observe in any individual case are representative of broader trends. The implicit question in our research is always ‘what would have happened if conditions had been different?’ Of course, it is impossible to answer this counterfactual with certainty since history happens only once, and we cannot repeat the ‘experiment’ in a laboratory. But that does not mean we should shrug our shoulders and abandon the enterprise. Instead, we can gain insight by looking at cases in which conditions were, in fact, different. To illustrate, let’s return to the smoking example above. Studying a single smoker in depth might give us an accurate and textured understanding of the role of smoking in this person’s life, but it would be a poor way to learn about the broader health effects of smoking, because we could not make an informed guess about what would have happened had he not smoked. Our approach described earlier, in contrast, allows us to generalize about the effects of smoking on health. For precisely this reason, large-scale quantitative analysis is the primary method by which medical researchers have tackled the health effects of tobacco smoke. To be sure, some of the data in our hypothetical study would surely be inaccurate, and we would know comparatively little about the lives of each individual subject. But the loss in individual case knowledge would be more than compensated by the increase in information about the variables we hope to study. So it is with nuclear weapons. To understand how nuclear weapons impact international crises, we must examine crises in which nuclear ‘conditions’ were different. For Kroenig, this means comparing the fortunes of crisis participants that enjoyed nuclear superiority to those that did not. For Sechser and Fuhrmann, it means comparing the effectiveness of coercive threats made by nuclear states to those made by nonnuclear states. By making these comparisons, we can begin to engage in informed and evidence-based speculation about how nuclear weapons change (or do not change) crisis dynamics. Indeed, the statistical models we employ require this comparison – they will return no results if all of our cases look the same. Gavin argues that the Berlin/Cuba episode is sufficient for understanding the dynamics of nuclear weapons because it is the “most important and representative” case of nuclear deterrence and coercion.12 There are two distinct (and contradictory) claims here: that the case is the most important crisis episode for studying nuclear weapons, and that it is representative of the broader universe of such episodes. With respect to the first claim, Gavin offers no criteria for evaluating what an “important” case might be. What makes a case important – its profile among the general public? Its consequences? The availability of information about it? The countries involved? Moreover, for whom must the case be important? Gavin may view the 1958–1962 case as critical for understanding nuclear dynamics, but it is by no means clear that policymakers today look to this example for guidance about dealing with Iran or North Korea. This is not to say that we disagree with Gavin’s assessment – undoubtedly the 1958–1962 episode is important in many respects. But importance, like beauty, is in the eye of the beholder. The second claim is equally dubious: that the 1958–1962 episode is somehow representative of the ways in which nuclear weapons typically shape international politics. Without first examining other cases, Gavin simply has no grounds on which to base this claim. Moreover, there is tension between this claim and his previous assertion that the case is important: one key reason the Cuba/Berlin episode is often seen as important is because it was not like other Cold War crises: nuclear weapons were brandished more explicitly, and stoked more public anxiety about nuclear war, than any other crisis before or since. In the broader universe of crises, this episode actually may be quite anomalous. If so, then studying it to the exclusion of other cases would yield misleading conclusions about the role of nuclear weapons in world politics. A key advantage of quantitative methods is that the researcher need not make questionable judgments about which cases are more or less important: unless explicitly instructed otherwise, statistical models assign equal weight to each case. Likewise, statistical models provide ways to identify – and exclude – anomalous cases that deviate markedly from dominant trends. Indeed, a quantitative analysis can be a useful precursor to the selection of individual cases for in-depth analysis, precisely because it allows us to locate cases that either represent or deviate from the overall pattern. These selections, however, are based on careful comparisons with other cases, not opaque judgments. A second advantage is that quantitative analyses provide greater transparence about methods, judgments, and conclusions. One of Gavin’s central critiques is that various cases in our quantitative analyses have been miscoded. In other words, he argues, we have mismeasured important factors.13 This criticism – irrespective of its validity14 – is possible only because our coding decisions are unambiguous and easily ascertained from our datasets. Moreover, each of our studies sets forth clear rules for how each variable in our datasets was coded. This does not mean that our coding decisions are all correct and beyond dispute, but it does mean that they are clearly stated for outside scholars to evaluate. This degree of transparency is a key strength of quantitative research. Because each case in a quantitative analysis necessarily must be clearly coded,15 there is no ambiguity about how the researcher has classified each case. If other researchers believe a case should be coded differently, they can make that change and rerun the analysis. By extension, quantitative research designs permit scholars to easily evaluate how much a study’s findings depend on individual coding decisions. Simply noting a few coding errors or differences of interpretation in a large quantitative dataset is of little consequence unless one can demonstrate that those differences are responsible for generating incorrect inferences. In a quantitative study, this typically amounts to recoding disputed cases and repeating the core statistical models to determine whether the results change substantially. 16 Not only are the original coding decisions laid bare, but it is also straightforward to determine whether the study’s inferences depend on them. This high level of transparency — and the external quality-control it enables – is one of the most attractive features of quantitative research designs. Transparency is useful not because it produces scholarly consensus, but because it allows opposing sides to identify the precise nature and implications of their disagreements. Consider, for example, the 1990 exchange in World Politics between Paul Huth and Bruce Russett on one hand, and Richard Ned Lebow and Janice Gross Stein on the other. highlights the similarities between this debate and the present exchange, separated by almost twenty-five years, as evidence that quantitative analysis has made little progress in understanding nuclear issues. We see the issue differently. Both debates, in fact, illustrate a key strength of quantitative analysis: the ability to assess the importance of individual coding decisions. In the World Politics debate, Lebow and Stein objected that Huth and Russett had improperly coded many cases in their deterrence dataset, much as Gavin has disputed some of our classifications But Huth and Russett responded by noting that “even if Lebow and Stein’s recodings of our cases are accepted, the statistical and substantive findings of our past research remain fundamentally unchanged.”18 Similarly, as we report in our articles, our central findings do not change even if we accept Gavin’s arguments. In a quantitative study, simply showing that certain coding decisions can be contested is insufficient: one must also demonstrate that the core results depend on those decisions. While Gavin is correct to argue that coding cases is a tricky exercise, quantitative approaches allow us to evaluate the substantive importance of questionable coding decisions. Qualitative research, by contrast, is not always so amenable to external oversight. Whereas quantitative models demand clear coding decisions, qualitative research designs can be much more forgiving of ambiguous classifications. Gavin’s critique of our coding decisions illustrates this problem: while he criticizes the way we have coded particular cases in our datasets, he offers no clear alternative coding scheme. He raises questions about our coding decisions, but then declines to answer them. This ambiguity allows him to have his cake and eat it too: he can criticize our classifications without being liable for his own. Uncertainty, of course, is inherent to any scientific enterprise, and quantification is sometimes criticized for presenting a false illusion of certainty. To be clear, quantitative research cannot create certainty where the evidence is ambiguous. Just because a case is coded a certain way does not mean that the broader scholarly community (or even the researcher) has reached a consensus about that case. Likewise, the problem of ambiguity is not inherent to qualitative research: nothing intrinsic to historical research precludes scholars from laying their assumptions bare. But by compelling scholars to take a clear initial position on coding cases, the process of quantification allows scholars to debate each decision and evaluate whether potentially questionable choices are decisive in generating a study’s core results. This transparency is central to peer evaluation and, ultimately, scientific advancement. A third advantage of statistical analysis is that it is designed to cope with probabilistic events. In the physical world, causal relationships are often deterministic: a certain amount of force imparted to an object will cause that object to move a certain distance. So long as conditions are kept constant, this result will obtain again and again, no matter how many times the experiment is repeated. In the social world, however, we are not blessed with such ironclad reliability. No two individual people are exactly identical, and even in carefully controlled environments it is rare to find a “force” that begets exactly the same effect on all people with perfect regularity. The causal relationships we observe are not deterministic – they are probabilistic, occurring with imperfect regularity.19 The ‘force’ of interest to us in our articles is, broadly, the possession of nuclear weapons. When this force is applied to crisis bargaining situations, what happens? Implicit in this question, however, is a question about probability: when nuclear weapons are inserted into a crisis bargaining situation, what is the likelihood of a particular outcome? Kroenig’s study, for example, asks: in a nuclear crisis, what is the likelihood that the nuclear-superior side will achieve its basic goals? Likewise, Sechser and Fuhrmann seek to discover the likelihood that a coercive demand made by a nuclear-armed state will be met. The central difficulty with posing our research questions in this way is that we cannot actually see the thing we care about: probability is inherently unobservable. We cannot examine a crisis and directly observe the probability of one side capitulating; we can only observe whether it actually capitulated.20 How, then, can we begin to answer our original research question? Quantitative research is designed for precisely this sort of situation. If we cannot directly observe whether we are holding a loaded six-sided die, for example, we can throw it many times, observe the result, and infer the underlying probability from the results. Throwing the die just one time would tell us little, since all six numbers are theoretically possible even if the die were loaded. Only after observing the pattern of results across many events can we determine the underlying probabilities of each number turning up. The single-case approach Gavin proposes cannot cope with probabilistic events as effectively. Knowing that one smoker happened to die of cancer does not tell us much about the broader health effects of tobacco. Based on this single data point, we might conclude that smoking leads to cancer 100 percent of the time. Yet we know this to be false: there are heavy smokers who remain cancer-free, just as there are nonsmokers who still get cancer. The true relationship between smoking and cancer emerges only after looking at a large number of cases. Similarly, even if we determine that nuclear weapons appeared to “matter” from 1958-1962, we cannot safely infer from this observation that nuclear weapons influence crisis outcomes in general. Any relationships observed during this particular period could have been due to any number of chance events that might be unlikely to recur. Studying just one episode allows us to say much about that episode but little about the underlying relationships. Fourth, statistical analysis allows researchers to uncover causal relationships in social phenomena even if the participants themselves do not record, record accurately, or understand these relationships. Gavin’s approach, in contrast, requires finding primary source documents and learning what participants themselves believed to be the relevant causal factors at play. His essay conveys an exceptionally narrow conception of how one should gather knowledge about the effect of nuclear weapons on international politics. Gavin believes that if one wants to “really understand” the effect of nuclear weapons on international politics,21 archival research is “the only way to get real insight.”22 While we agree that studying primary documents has great value, we believe that there are many other ways to generate useful knowledge, and that a narrow focus on primary documents can often lead a scholar astray.

#### Oversaturation and disengagement is not absolute – individual actions are context specific have a material impact in spite of the linguistic economy

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While I find Liesegang’s argument plausible, **there are** other explanations **for this apparent disinterest and disengagement outside of Baudrillard’s theory of the postmodern condition** or a desire to neutralize the German past, although it does have to do with socio-economic status. One of the things that many of us familiar with German culture admire about it is the state’s commitment to creating livable conditions for virtually all of its citizens. The social welfare network in Germany (indeed in Western Europe more broadly) may be under siege in the current economic climate, but from health care to housing the state has managed to offer its citizens a level of basic support that Americans cannot really fathom and—as the most recent health care debate demonstrated—in large numbers appear not to condone. Thus, **the** glaring **need for individual citizens** **to offer their services to their fellow human beings has remained somewhat underdeveloped** in Germany (Wiedermann and Held) **and has led to a set of expectations that the government will address the society’s most basic needs**. **Recent studies of volunteerism** in Germany indicate that this is changing **and that a substantive portion of the population** **now gives of its time to myriad social organizations** in ways that would seem entirely futile to the characters in the texts analyzed here.13 Furthermore, sociological and social psychological studies indicate that **people who volunteer do feel a greater connection to other people and a greater level of personal satisfaction than those who do not.**14 The findings of this research, as mentioned above, [End Page 258] have led me to question whether the literature analyzed in this article reflects the perspective of a highly specific section of German society far more than it offers a broader portrait of central European society today, namely that of a disaffected, disengaged intellectual class that no longer sees itself as called upon to participate in the improvement of society now that the great German political problem of the 20th century appears to have been “solved.” This may have something to do with the specific situation of Germany in the first decades after the fall of the Wall but it may also be a result of the socio-economic structures of the Federal Republic. **I do not wish to present here an overly simplified** and naïve **argument** **that Hermann’s characters should go out and get involved in volunteer organizations** and that doing so would make the pervasive sense of sadness and ennui vanish. **Nor would it necessarily reorient the consumerist attitudes or patterns of consumption** of Naters’ group of friends or Regener’s Herr Lehmann into more socially productive outlets. **However, I do question the individual, social, and even aesthetic value of** wallowing in indecision **and isolation and presenting them as representative of a crisis in human subjectivity**. Steven **Best describes the world** according to Baudrillard **as “an abstract non-society devoid of cohesive relations**, social meaning, and collective representation” (Best 51). The characters of Mau Mau, Herr Lehmann, and the stories of Sommerhaus, später and Nichts als Gespenster inhabit the same or at least a similar world to Baudrillard’s. Thus **Baudrillard’s work offers an effective tool in understanding the implications of the world these literary characters inhabit and their creators’ perspective** on contemporary German society. **Their world, however, is itself a human projection**, a choice**. It is an** interpretation of reality **that allows individuals to become resigned and passive.** Furthermore, it is a perspective possible only from a position of relative affluence. **I shall not venture to judge whether Baudrillard’s diagnosis** of postmodern society **is accurate**, although it appears that many of Germany’s current writers agree with him or were influenced by postmodern theories of late 20th-century consumerist societies**. I can**, however**, say in conclusion that it** is not helpful **or productive on either an individual or social level in imagining ways of living in today’s world**. As Steven Best points out: **Baudrillard’s radical rejection** **of referentiality is premised upon a one-dimensional, No-Exit world of self-referring simulacra. But**, **however, reified and self-referential postmodern semiotics is,** signs do not simply move in their own signifying orbit. **They are** historically produced **and circulated and while they may not translucently refer to some originating world, they none the less can** be socio-historically contextualized, **interpreted, and critiqued.**(57) In other words, **human beings generate the simulacra in specific historical contexts that are** subject to interpretation and challenge. **Regardless of** how pervasively the media spin our reality**,** real people suffer **and**—**occasionally** [End Page 259] prosper—**because of political decisions made at the local, national, and international level**. **Media images may overpower us, but they** shouldn’t make us lose sight of the real ramifications of political and economic development. **Many critics have suggested that Baudrillard’s chief accomplishment** **was to serve as an agent provocateur.** In an interview with Mike Gane, **Baudrillard himself saw his method of reflection as “provocative, reversible**, [ . . . ] **a way of raising things to the ‘N’th power** [ . . . ] It’s a bit like a theory-fiction” (Poster 331). **One could argue that this is precisely the function of such novels and short stories as the ones examined here: to provoke us**. But to what end? Naters, Regener, and Hermann all write very readable literature, and they challenge us to understand the world of the insipid, self-centered, and myopic characters that they have created. **It would indeed be a disservice to the authors to imply that they do not view their own characters with** critical distance. Thus, I am not suggesting that they believe their readers should emulate the characters they have created. **They have not, however, successfully demonstrated either why we should care about them or**—**more importantly**—**what we can learn from them**.

#### Even if entirely objective truth is impossible – we can judge truer ways to view the world and identify certain material points of analysis – they collapse the search for truth into abstraction which doesn’t solve and promotes arbitrary violence

Postman, chairman of the Department of Culture and Communication @ NYU, ‘99 (Neil, *Building a bridge to the 18th century*, Pg. 77-81)

This is a form of radical relativism that would have befuddled many Enlightenment thinkers. If I may be permitted another "thought experiment," I can imagine a synoptic reply by the advocates of reason that would go like this: "There are words that do not seem to refer to anything in the world of non-words. **And there are 'truths' that cannot be verified**, and which gain their authority from other words **that cannot be verified.** But many words are reflections of reality. To be sure, the reflections are at varying levels of abstraction, e.g., 'tree is more abstract than 'oak/ which is more abstract than 'this eight-foot oak which you are leaning against.' **But it is the** key to intelligence, if not sanity, to be able to assess with some accuracy **the extent to which words refer to the world of non-words**. Modern medicine is better than witchcraft **precisely because its language is a more** accurate depiction **of the world of non-words.** 'More accurate1 **means closer to reality**; that is, 'truer' or 'more objective.' You may say, if you wish, that all reality is a social construction, **but you cannot deny that some constructions are** 'truer' than others. They are not 'truer' because they are privileged; **they are privileged because they are 'truer**. As for procedures that are effective, **e.g., inoculations** against smallpox, sending astronauts to the moon and returning them safely to Earth, and two hundred million other procedures executed daily by sane people, they work because they are derived from sets of propositions **whose** 'truths' have been tested **and shown to be in** accord **with our** limited understanding **of the** structure of reality." Nothing I have said above means to imply that there can be certainty about our knowledge. It is the quest for certainty that the best-known "postmodernist," Jacques Derrida, has found dangerous, and which he suggests is embedded in the Enlightenment tradition. He calls it "logocentrism." There is no doubt that there were some Enlightenment philosophers, inspired perhaps by Descartes, who can fairly be charged with believing in the possibility of certain knowledge. The most notorious expression of this is found in an essay by Pierre-Simon de Laplace published in 1814. He wrote: A mind that in a given instance knew all the forces by which nature is animated and the position of all the bodies of which it is composed, if it were vast enough to include all these data within his analysis, could embrace in one single formula the movements of the largest bodies of the universe and of the smallest atoms; nothing would be uncertain for him; the future and the past would be equally before his eyes.8 There is, of course, no scientist today who believes this, and there were very few in the eighteenth century. Then, as now, the idea of certainty functions, for most, as a kind of metaphor, reflecting the thrill of discovering something that appears to be true for everyone at all times, e.g., that blood circulates through the body, that the Earth revolves around the sun, that the rights of human beings derive from God and nature, that the market is self-regulating. Enlightenment scientists and political and social philosophers wrote of these ideas "as if" they were immutable and universal. Some of these ideas, e.g., that human rights are derived from God and nature, are highly debatable, and led in the eighteenth century to arguments about the sources of the origin and authority of human rights. One need only read the quarrels between Edmund Burke and Tom Paine to get a sense of the status of such "truths." These quarrels continue to this day, and one may wish to argue that these "truths," if they are such, are applicable only to Western culture. The term "Eurocentric" is sometimes used (always as a pejorative) to suggest that such "truths" are limited in their scope, and, in fact, may be thought of as mere prejudices. Of course, if one does deny the universality of these "truths," one must explain why some of them—for exam-pie, "those who govern must do so by the will of the governed"— appeal to people all over the world, why even the most repressive regimes will call themselves "a people's democracy." Is it possible that there is at least a universal resonance to these ideas? To label an idea "Eurocentric" does not necessarily mean it does not have universal application. After all, the claim that the blood circulates through the body or that the speed of light is 186,000 miles per second is "Eurocentric," at least in origin. Are these "truths" mere prejudice or are we entitled to treat them as if they are universal and immutable? If postmodernism **is simply** skepticism **elevated to the** highest degree, **we may give it muted applause.** The applause must be muted because even skepticism requires nuance and balance. To say that all reality is a social construction is interesting, indeed provocative, but requires, nonetheless, that distinctions be made between what is an unprovable opinion and a testable fact. And if one wants to say that "a testable fact" is, itself, a social construction, a mere linguistic illusion, **one is moving dangerously close to a kind of** Zeno's paradox. One can use a thousand words, in French or any other language, to show that a belief is a product of habits of language—**and graduate students by the carload can join in the fun**—**but blood still circulates through the body** **and the AIDS virus still makes people sick** and the moon is not made of green cheese**.** One may also say something like this about the "postmodern" view of texts. Roland Barthes is frequently cited as the originator of the announcement of "the death of the author." He is usually taken to mean that readers create their own meanings of a text irrespective of the author's intentions. Thus, the meanings of texts are always shifting and open to question, depending on what the reader does with the text. If this means that texts (including spoken words) may have multiple meanings, then the idea is a mere commonplace. But if it is taken to mean that there is no basis for privileging any meaning given to a text over any other meaning, then it is, of course, nonsense. You can "deconstruct" Man Kampf until doomsday **and** it will not occur to you **that the text is a paean of praise to the Jewish people**. Unless, of course, you want to claim that **the text can be read as irony,** that Hitler is spoofing anti-Semitism. No one can stop you from doing this. **No one can stop anyone from misreading anything** or rationalizing anything or excusing anything. Derrida, with whom the word "deconstruction" is most commonly associated, gave a superb example of how one may choose to misread, in his defense of Paul de Mans pro-Nazi writings during the German occupation of Belgium. De Man is one of the founders of the postmodern school of "deconstructing" texts, and when his pro-Nazi articles were discovered after the war, he wrote a letter to Harvard's Society of Fellows explaining himself. In such a circumstance, it is convenient, to say the least, to represent the view that all meanings are indeterminate, that there can be no definitive interpretations of any text. In any case, de Man s letter was filled with ambiguities and even outright lies, about which Derrida commented: "Even if sometimes a minimum of protest stirs in me, I prefer, upon reflection, that he chose not to take it on himself to provoke, during his life, this spectacular and painful discussion. It would have taken his time and energy. He did not have very much and that would have deprived us of a part of his work."9 As Anthony Julius puts it in describing the affair: Derrida is saying that telling the truth should be avoided because it is time-consuming. Derrida, so far as I know, has not argued that any meaning can be attributed to a text, **only that there are wider possibilities** than are usually accepted or expected. Perhaps there are no postmodernists who argue that any meaning can be justified. But in surveying the work of well-known postmodernists, I find no clarity about—indeed, no interest in—**the** standards **by which certain meanings may be** excluded. **The process of making meaning** from a text **involves as much withholding meanings as adding them**, and knowing the rules that govern when it is appropriate to do either is at the core of reasonable interpretation. Derrida, in fact, **knows this as well as anyone,** since his famous analyses of the contradictions in the texts of Plato and Edmund Husserl, among others, are as good a demonstration of how to read deeply as any we have. But there are those who have taken the act of postmodern reading and writing to the edge of absurd^ the case of The Great Postmodern Spoof of 1997. Alan physicist at New York University, submitted a long essay to journal Social Text, noted for its commitment to postmodern thought. After the essay was published, Sokal revealed that it Was complete gibberish from beginning to end. Not error-laden not overstated, not even an exercise in fantasy. Gibberish. Appar-ently, this was not noticed by the editors of Social Text, or if it was, they felt that gibberish is as good as any other form of discourse. Sokal has continued his assault on postmodern writing by joining with John Bricmont, a Belgian physicist, in writing Fashtonabk Nonsense, a devastating critique of the writings of Regis Ddbm Jacques Lacan, and Jean Baudrillard, among others. Of Bau-drillard's theories about "multiple refraction in hyperspace," Sokal (in an interview with the London Times) said: "In physics, the word 'space' exists, as does hyperspace and refraction. But multiple refractions in hyperspace? ... It appears to be scientific, but in fact it is as pompous as it is meaningless."10 Pomposity we can survive. But meaninglessness is another matter. Fortunately, **most of us have not succumbed to the pleasures of meaningless language**. We struggle as best we can to connect **our words with the world of non-words**. Or, at least, to use words that will resonate **with the experiences of those whom we address**. But one worries, nonetheless, that a generation of young people may become entangled in an academic fashion **that will increase their difficulties in** solving real problems—indeed, in facing them. Which is why, **rather than their reading Derrida**, **they ought to read Diderot, or Voltaire**, Rousseau, Swift, Madison, Condorcet, or many of the writers of the Enlightenment period who believed that, **for all of the difficulties** in mastering language, it is possible to say what you mean, to mean what you say, **and to be silent when you have nothing to say**. They believed that it is possible to use language to say things about the world that are true—true, meaning that they are testable and verifiable, that there is evidence for believing. Their belief in truth included statements about history and about social life, although they knew that such statements were less authoritative than those of a scientific nature. They believed in the capacity of lucid language to help them know when they had spoken truly or falsely. Above all, they believed that the purpose of language is to communicate ideas to oneself and to others. Why, at this point in history, so many Western philosophers are teaching that language is nothing but a snare and a delusion, that it serves only to falsify and obscure, **is mysterious** to me. Perhaps it comes as a consequence of our disappointments in the twentieth century. Perhaps some of our philosophers have been driven to a Caliban-like despair: You taught me language and my profit on it is that I know how to kill and be cruel." If so, it is understandable but not acceptable. Can we go into the future believing that gibberish is as good as any other form of language?

#### Information is persuasive and the alt fails

Robinson 04 [Andrew, http://andyrobinsontheoryblog.blogspot.com/2004/11/baudrillard-zizek-and-laclau-on-common.html]

Baudrillard's claim that the masses are "dumb", silent and conduct any and all beliefs (SSM 28) and "the reversion of any social" (SSM 49) is problematised by the persistence of subcultures and countercultures, while his claim that any remark could be attributed to the masses (SSM 29) hardly proves that it lacks its own demands or beliefs. He is leaping far too quickly from the confused and contradictory nature of mass beliefs to the idea that the masses lack - or even reject - meaning per se. He wants to portray the masses as disinterested in meaning, instinctual and "above and beyond all meaning" (SSM 11), lacking even conformist beliefs (87-8) and without a language of their own (22). This is contradicted by extensive evidence on the construction of meaning in everyday life, from Hoggart on working class culture to Becker, Lemert, Goffman and others on deviance. Even in the sphere of media effects, the evidence from research on audiences, such as Ang on Dallas viewers and Morley on the Nationwide audience, suggests an active construction of meaning by members of the masses, negotiating with or even opposing dominant codes of meaning. This may well show a decline of that kind of meaning promoted by the status quo - but it hardly shows a rejection of meaning per se. When the masses act stupid, it may well be due to what radical education theorists term "reactive stupidity" - an adaptive response to avoid being falsified and "beaten" by acting stupid. Baudrillard again wrongly conflates the dominant system with meaning as such. Indeed, Baudrillard seems to have changed his mind AGAIN by the time of the Gulf War essays, when he refers to the MEDIA, not the masses, as in control (GW 75), and to stupidity as a result of "mental deterrence" (GW 67-8), which produces a "suffocating atmosphere of deception and stupidity" (GW 68) and a control through the violence of consensus (GW 84). Baudrillard's view that the masses respond to official surveys and the like in a tautological way (SSM 28) may well be true, without proving what Baudrillard claims it does about the absence of meaning in the masses. The attitudes of subaltern groups towards dominant beliefs has often taken such forms throughout history, but this does not preclude the parallel existence of what Jim Scott terms "hidden transcripts" - a parallel set of beliefs with a separate structure of meaning which are not compromised by power. Baudrillard does not dig deep enough into evidence on mass culture to assess whether such transcripts exist or not. He simply assumes the omnipotence of the official, "public" system of meaning. Further, his claim that what passes through the masses leaves no trace (SSM 2) is very problematic, as his claim that the masses are the negation of all dominant meanings (SSM 49). There are some very strange 'proofs' in Baudrillard's work: for instance, the claim that people don't believe the myths they adopt rests on the statement that to claim the opposite is to accuse the masses of being stupid and naive (SSM 99-100). He does not explain why we should not believe this - especially since he elsewhere calls them "dumb like beasts"! Occasionally, Baudrillard acknowledges evidence against his approach: namely, the research of the "two-step flow" theorists on audience effects, and also the kind of syncretic resistances analysed by Scott, which resist the dominant social system and reinterpret or "recycled" its messages towards different codes and ends, often linked to earlier social forms (SSM 42-3). However, he does not dwell on such evidence. This, he says, is simply a different issue, unrelated to the question of the MASSES as "an innumerable, unnameable and anonymous group" operating through inertia and fascination (SSM 43-4). Attempts to recreate meaning at the periphery are a "secondary" matter (SSM 103-4). Similarly, at times, Baudrillard admits both the unsatisfactory nature of the society of the spectacle for many of its participants, and the existence of spheres of belief and discourse beyond its borders. For instance, people don't fully believe the hyperreality which substitutes for reality (SSM 99); some groups, so-called "savages" such as the Arab masses, are not submerged in simulation and can still become passionately involved in, for instance, war (GW 32); the real still exists underground (GW 63). Indeed, although his analysis of the Gulf War suggests that the WEST is trapped in simulacra, his account of the rest of the world suggests it follows a different logic (eg GW 65). Wars or non-wars today are waged by the west against symbolic logics which break with the dominant system, such as Islam (GW 85-6), to absorb everything which is singular and irreducible (GW 86). Also, though he thinks the risk of it is low, he admits that an accident, an irruption of Otherness, or an event which breaks the control exerted by information can disrupt the "celibate machine" of media control (GW 36, 48). If this is the case, however, there is no basis for assuming its totality, and it is still meaningful to try to win people over to alternatives. In SSM Baudrillard retreats from this analysis, suggesting the reduction of society to a rat race is a result of the masses' resistance to 'objective' economic management (SSM 45) - the system benefits as a result but that is not the main issue. This contrasts with Baudrillard's earlier analyses and also those of others such as Illich, who see the destructive social effects of such competition. However, Baudrillard does attack "the social", which he identifies with control through information, simulation, security and deterrence (SSM 50-1) - though how it can be resisted since he thinks it "produces" us is never explained. Baudrillard tends to conflate existing dominant beliefs with thought and meaning per se. As a result, he leaves it impossible to critique dominant ideas in a meaningful way. For instance, he poses political problems in terms of "resistance to the social", with the social in general being conflated with the EXISTING social system (SSM 41); ditto on the existing sign system, which Baudrillard identifies with meaning per se. In such cases, Baudrillard misses the whole question of countercultural practices and the creation of alternative hegemonies. Baudrillard's conflation of meaning per se with dominant beliefs leads to a refusal to countenance the possibility of transforming mass beliefs. Raising the cultural level of the masses, Baudrillard claims, is "Nonsense" because the masses, who want spectacle rather than meaning, are resistant to "rational communication" (SSM 10). An "autonomous change in consciousness" by the masses, Baudrillard tells us, is a "glaring impossibility" (SSM 30) - though he never tells us how he deduces this. Furthermore, he also claims that people who try to raise consciousness, liberate the unconscious or promote subjectivity "are acting in accordance with the system" (SSM 109). This anathematisation is a result of Baudrillard's strange claim that the system's logic is based on total inclusion and speech! It is on this basis that Baudrillard rejects argument based on empirical claims and locates truth outside such claims (SSM 121-2). From the second pole of his contradictory argument about the masses, which portrays them as de facto agents engaging in resistance, defiance and so on, Baudrillard wants to draw a politics starting from the refusal of meaning (SSM 15), and from the contradictory combination of the two he draws his model of hyperconformity as annulling control (SSM 30-3). He can't deal with the contradiction, especially since he uses terms which imply consciousness - such as ruse and offensive practice - when he admits the object of such terms is acting unknowingly (SSM 43). Indeed, he actually writes as if one can UNKNOWINGLY carry out a CONSCIOUS act (SSM 42). This is sinister, reproducing the Stalinist idea of objective alignment - especially when used against Baudrillard's theoretical rivals (SSM 123). Further, it is not clear from where he is deducing his idea that one can destroy a system by pushing its logic to the extreme (SSM 46), which he sees as a resistance to demands to participate (SSM 106-8). There are a few cases of the letter of the law being used to subvert its implementation, such as go-slows at work; these, however, are rooted in concrete practices elsewhere. There are also a few cases of hyperconformity disrupting official projects - for instance, the disastrous effects of Chinese peasants' literal reading of Maoist imperatives to (eg.) kill all birds. These, however, did not actually LIBERATE anyone or DESTROY the system; and most hyperconformity simply produces a more oppressive variant on the system - for instance, hyperconformist racism produces genocide. He also never sets out the stakes of the conflict between the masses and society or the effects of the masses' victories, though he vaguely links these to the (unspecified) goals of radical critics (SSM 49). Indeed, he uses the opt-out that our present epistemology prevents us knowing what possibilities would be offered by the system's destruction (SSM 52). Furthermore, to be a resistance, there would have to be an AGENT CHOOSING to be an object. Baudrillard's sectarianism is clearly shown by his belief that popular rethinking of ideas is always a "misappropriation" or "radical distortion" rather than an improvement (SSM 8). He also engages in a highly essentialist attack on popular ethics, representing the stress on real practices and small images in popular religion as "degraded", banal and profane, a way of "refusing the categorical imperative of morality and faith", as well as of meaning, because it stresses immediacy in the world (SSM 7-8). Popular ethics, as Hoggart, Scott and others show, is far more than a mere refusal, and its rejection of the transcendentalism of the intellectual allies of dominant strata is hardly evidence that they are degraded, banal or anti-ethical. Furthermore, on an empirical level, fatalism DOES occur in popular ethics, contrary to Baudrillard's claims. The problem is further complicated by Baudrillard's vague claim that something passes between the masses and terrorism (SSM 52-3), which seems to imply that isolated terrorist acts can somehow transform overnight the entire structure of meaning by rendering representation impossible and meanings reversible (SSM 54, 116), and which is also based on a definition of terrorism which is so restricted that it rules out virtually all actual "terrorists" and which Baudrillard admits (116) does not fit the identities of the Baader-Meinhof group, the one example he gives. His politics results directly from the artificial grimness of his analysis of popular beliefs, since it involves a radical subjectlessness and a random blow against victims who are punished for being nothing (SSM 56-7). Like Zizek, he calls for the suicidal destruction of one's own perspective (SSM 69-70), and denounces everything short of this as strengthening the system (SSM 72). Furthermore, his model of social change, which rests on the inevitability of implosive catastrophe (SSM 61), has no room for any human intervention. It simply assumes that another reality lies beyond our own perspective which can be reached in this way, but which is presently blocked by our way of thinking (SSM 104). Baudrillard substitutes "logical exacerbation" and "catastrophic revolution" for alternatives (SSM 106), and locates the frontier of struggle at the level of "production of truth" (SSM 123). The progressive side of this struggle seems to involve unknowability and fascination. The lack of alternatives seriously blunts Baudrillard's critical force, and can even lead to conservative positions, such as portraying manipulation of the media as better than pursuing truth (GW 46).

#### Information overload does not preclude successful communication – political deliberation allows movement toward contingent communicative agreement that produces transformations

Dahlberg ‘5 (Lincoln, University of Queensland, Center for Critical and Cultural Studies, Visiting Fellow, “The Habermasian public sphere: Taking difference seriously?,” *Theory and Society*,Vol. 34, pp. 111-126)

I believe this critique of power, transparency, and the subject is largely based upon a poor characterization of Habermas’ position. There are three main misunderstandings that need to be cleared up here, to do with power as negative, as able to be easily removed, and as able to be clearly identiﬁed. First, Habermas does not deﬁne power as simply negative and as therefore needing to be summarily removed from the public sphere. The public sphere norm calls for “coercion-free communication” and not power-free communication. Habermas emphasizes the positive power of communicative interaction within the public sphere through which participants use words to do things and make things happen.60 Communicative rationality draws on the “force of better argument” to produce more democratic citizens, culture, and societies. Subjects are indeed molded through this constituting power, but their transformation is towards freedom and autonomy rather than towards subjugation and normalization. As Jeffrey Alexander points out, to act according to a norm is not the same as to be normalized.61 The public sphere norm provides a structure through which critical reﬂection on constraining or dominating social relations and possibilities for freedom can take place. As Chambers argues, rational discourse here is about “the endless questioning of codes,” the reasoned questioning of normalization.62 This is the very type of questioning critics like Lyotard, Mouffe, and Villa are engaged in despite claiming the normalizing and repressive power of communicative rationality. These critics have yet to explain adequately how they escape this performative contradiction, although they may not be too concerned to escape it.63

#### Capital’s widespread dissemination of technical means of communication has not lead to overloaded passive subjects but instead allows for autonomous media that reappropriate technology to create lines of flight resistant to capitalism.

Dyer-Witheford 99 [Dyer-Witheford, Nick. 1999. Cyber-Marx: cycles and circuits of struggle in high-technology capitalism. Urbana: University of Illinois Press] RE

However, analyses such as Smythe's often assume capital's intended exploitation of audience-power is fully successful. From my perspective, the more interesting question is how it fails. If audience power is today analogous to labour power, then it too is a disobedient subjectivity that evades, resists, and reshapes technological controls. There is now extensive evidence that viewers, listeners and readers do not passively accept hypodermic injection with narcotic messages, but are rather active agents who engage in thousands of little lines of flight and fight--from turning off advertisements to the oppositional reinterpretation of programs and the creation of micro-networks of decommodified cultural activity.109 At the very time when innovations in communication are becoming the basis for vast commercial empires, there is apparent an opposite tendency that flouts the logic of the market. People are using the new technologies to get or give out information for free: reproducing, transmitting, sampling and reconfiguring without respect for commercial property rights. This is known as `piracy.' And it is prevalent. As access to the new communication machines becomes more and more thoroughly socialised, we see a wave of photocopying, home taping, bootlegged videos, copied software, zapping, surfing, descrambling, and culture jamming. Moreover, an increasingly wide variety of groups and movements are using this generalised availability of communication technologies not simply for individual but for collective purposes. This manifests in the development of `alternative' or `autonomous' media.110 Such experiments first blossomed during the 1960s and 1970s in a wave of radio-activism, guerrilla video, and public access cable movements.111 Despite enormous difficulties they have persisted. Radio-activism has continued and spread, reinvigorating itself in North America by the proliferation of inexpensive, low power, and usually illegal microwatt FM broadcasting by ghetto communities, squatters and the homeless.112 Oppositional video- making has passed from the avant-garde to common practice amongst social movements.113 New areas of activism have opened around television, with the attempts in the US and Canada to create and sustain public access cable--a medium whose political potential has been developed by the Paper Tiger Television collective and its satellite broadcasting Deep Dish project.114 Lack of resources mean that in most cases the reach of such experiments is limited and their aspirations only very partially realised. But, however raggedly, alternative media do posit something different from, and opposed to, capital's mobilisation of "audience power." Corporate interactivity is ratificatory: it posits dialogue only within the preset limits of profitability. Autonomous media, on the other hand, are, as Rafael Roncaglio puts it, "alterative"--probing the limits of established order.115 Their practice often includes projects of self-representation, involving subjects in the definition and documentation of their own social experience. They attempt to overcome the restrictions of technical expertise characteristic of capital's division of labour. They experiment with forms of collective ownership. Above all, alternative media often give a voice to precisely those who are excluded or silenced by the commercial logic of market-driven information industries--either because they are not demographically desirable or because they are politically suspect. Thus, looking back for a moment at the Los Angeles riots of 1992, one remarkable aspect of the uprising was the degree to which the insurrectionaries were able to turn some elements of capital’s high technology surveillance and media apparatus to their own advantage.116 The uprising was, of course, ignited precisely by a classic instance of counter-surveillance --George Halliday's videotaping of Rodney King's beating, and the recording of incriminating police radio conversations. But even before the rebellion, its idiom of anger had already been disseminated by the high-tech cultural inventions of the ghettoised community--hip hop and rap, music whose political significance was neatly demonstrated by President Clinton’s subsequent public attack on rap artist Sister Souljah.117 During the riot, the omnipresence of the corporate media, covering the most televised urban uprising in history, had an ambiguous effect: although its representations frequently demonised and distorted the motives of the insurrectionaries, it could not entirely avoid giving voice to their outrage.118 Simultaneously, a variety of autonomous media, ranging from microwatt radio stations in ghettoised neighborhoods--such as the famous Zoom Black Magic Liberation Radio--to computer networks connecting activists in North America to others in Europe, spread a wider range of news, analysis and debate ignored by mainstream media.119 All this contributed to the circulation of supporting riots and demonstrations in Atlanta, Cleveland, Newark, San Francisco, Seattle, St. Louis, and Toronto, and to the perception of the riot as an indictment of the social policies of the Bush administration.120 Autonomous media have also played a significant part in less explosive but more protracted forms of struggle, such as the new waves of labour activism. In Los Angeles again, in an episode sometimes referred to as "the riot that didn't happen," Latino and Chicano janitors and maids fighting for a first contract in the hotel industry won a significant victory by threatening to circulate video evidence of abysmal working conditions to potential convention guests.121 In Las Vegas, workers involved in struggle with the entertainment giant MGM used similar “guerrilla media” tactics.122 The use by trades unions of video and film for activist training, worker self-education and public campaigning has become commonplace. In various US and Canadian cities, this media activism has to the establishment of regular labour programming on community cable and radio stations.123 This sort of activity is systematically fostered by organisations such as the Labor Video Project, which also works to connect North American efforts in this field to similar initiatives globally.124 These examples are only a part of a much wider circle of oppositional media activities. Other instances that could be cited, some of which will be examined in later chapters of this book, include the efforts of alternative media during the Persian Gulf War; the mobilisation of support for political-activist prisoner Mumia Abu Jamal, accomplished almost entirely through alternative radio, press, video and computer links; the Vancouver-based `Adbusters' attempt to infiltrate commercial channels with "subvertisments”; and the international computer networking associated with the transcontinental opposition to the North American Free Trade Agreement, the Zapatista revolution and the campaign against the Multilateral Agreement on Investment.125 Indeed, surveying the scope of this dissident media activity, it appears that capital, in developing its media apparatus, has let the genie out of the bottle. Just as, by computerising the factory, capital has not so much destroyed labour as dispersed it out into the wider social sphere, so by wiring the household it has not necessarily consolidated control over audiences. Rather, in its drive to extend the scope of the market, it has so thoroughly disseminated and made familiar the technical means of communication as to open the door to a series of individual and collective reappropriations. This means that on occasion corporate control can be interrupted, and spaces opened within which a multiplicity of social movements, all in different ways contesting the dominance of the market, can be connected and made visible to each other. New information technologies therefore appear not just as instruments for the circulation of commodities, but simultaneously as channels for the circulation of struggles.