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11. Catholic Universities and Social Action in the Context of the Transgressing of Planetary Boundaries

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Abstract

This paper will reflect upon Catholic universities' mission of pursuing the truth and promoting justice in light of the ecological crisis. First, it will examine how the truth of our ecological situation has been distorted by powerful special interests such that there is a wide gap between what the latest science is revealing about the ecological crisis and the understanding of the public and policy makers. Second, it will introduce the influential planetary boundaries framework, which identifies nine interlinked biophysical processes that modulate the stability of the Earth system, focusing especially on the climate change boundary. This framework allows one to recognize the scale of the problem and to distinguish and prioritize responses to those problems. Third, the planetary boundaries framework will be the yardstick by which the paper analyses the sustainability efforts of Catholic colleges and universities. The framework will also inform the concrete proposals to bring university sustainability efforts more in line with the truth of our situation and the demands of justice espoused in Catholic university mission statements.

Keywords: Catholic university, planetary boundaries, social projection, justice, sustainability

Introduction

In Vatican II's *Dogmatic Constitution on the Church (Lumen Gentium)*, the sanctifying mission of the Church and its social mission are seen as being of equal importance — the Church is in Christ as a sacrament or instrumental sign of intimate union with God (sanctifying mission) and of the unity of all humanity (social mission). Nearly half of a representative sampling of contemporary Catholic universities in the U.S. generally reflect the influence of this definition of the Church and give weight not only to the pursuit of truth but also to the promotion of justice and social responsibility (Estanek et al.: 208). The promotion of justice in these universities is predominantly seen as occurring through the education of students, including service learning. Though the notion of ecological justice has been operative in the documents of religious orders who sponsor many Catholic universities, especially the Jesuits and the Sisters of Mercy, the link between sustainability and justice has only moved into the foreground with the publication of Pope Francis's encyclical *Laudato si'*. In Francis's integral ecology, environmental degradation and social justice are inextricably linked, for the cry of the earth and the cry of the poor are not two crises, but rather "one complex crisis which is both social and environmental" (139). The reflection of university communities on *Laudato si'* and the ecological justice orientation of Catholic Universities is in its infancy.

The "see-judge-act" model of Catholic social action, which seems to inform *Laudato si'* (Cloutier) and was first articulated by Pope John XXIII in *Mater et magistra*, is a helpful model for Catholic universities as they reflect upon their sustainability efforts in the wake of *Laudato si'*. According to John XXIII, "there are three stages which should normally be followed in the reduction of social principles into practice. First, one reviews the concrete situation; secondly, one forms a judgment on it in the light of these same principles; thirdly, one decides what in the circumstances can and should be done to implement these principles. These are the three stages that are usually expressed in the three terms: look, judge, act" (236). This paper will follow the first two moments of this model in its reflection upon the mission of Catholic universities in the ecological crisis. It will not, in this limited space, be able bring to bear all the principles of Catholic social teaching on the current situation; rather, it will reflect upon Catholic universities' mission of pursuing the truth and promoting justice in light of the ecological crisis, while offering concrete ways for Catholic universities to live up to their mission statements in the context of this crisis.¹

Knowing the Truth of our Situation (Seeing): Distortions in the Public Understanding of our Current Ecological Crisis

The crucial phase in our contemporary context is the first phase of "seeing" or, more properly, knowing the situation. This is because there has been such a profound distortion in the United States regarding the truth of our ecological crisis. The so-called climate debate is emblematic of this distortion. As James Hansen has maintained, "a wide gap has developed between what is understood about global warming by the relevant scientific community and what is known by policymakers and the public" (2008: 1). Hansen's comment is supported by polling data. A 2010 poll conducted by Stanford researchers in collaboration with the

¹ Elements of this paper's argument are also advanced in a 2017 paper of mine examining the social role of secular universities in response to the climate crisis.

Associated Press showed that only 1% of Americans described the environment as the most important issue facing the country today. When they, however, were asked about the most serious problem facing the world in the future if nothing is done to stop it, 25% identified the environment and global warming (Yeager et al.). While the scientific community describes ecological degradation as an unprecedented emergency, the public thinks it is a problem that can be pushed off into the future.

The advance of knowledge means greater and greater specialization; no one person can be an expert in multiple fields of inquiry. Thus academics outside fields bearing upon the ecological crisis likely receive their information regarding the earth sciences from the prestige press. As a result their views on the ecological crisis tend to more closely resemble the public's view rather than that of the scientific community. This is because the press has done a poor job informing the public of the magnitude and urgency of the ecological crisis. This failure has been documented in multiple analyses by journalists, climate scientists, historians of science, and environmental scientists. For instance, Maxwell and Jules Boykoff, in a widely cited paper, analyzed the U.S. prestige press's (i.e. *New York Times*, *Washington Post*, *Los Angeles Times*, and the *Wall Street Journal*) coverage of global warming from 1988 to 2002 and demonstrated that their coverage "contributed to a significant divergence of popular discourse from scientific discourse" (125). The Boykoffs' analysis shows how those who deny global warming or the seriousness of it have received equal space as those who represent the basic tenets of the overwhelming consensus view of the relevant scientific community. The juxtaposition of the two sides created the impression that there was a persistent debate in the scientific community as to whether it was warming and whether human beings were the cause of that warming. This nominally balanced view thus distorted the public's understanding of the state of the question in climate science and thus has left the public needlessly confused about the issue. This distorted sense of balance has been exploited by conservative institutes, which have been underwritten by fossil fuel interests (see Oreskes and Conway; Jacques). In addition to their media campaigns to spread disinformation, these institutes were able to use the media's false sense of balance to skirt the peer review process of the scientific community in order to confuse the American public and policy makers. This amplified their influence in the public debate and created a gulf between scientific discourse and public discourse that has severely hampered the conversation concerning the climate problem.

Transgressing Planetary Boundaries

The planetary boundaries framework was introduced by 26 leading scientists in 2009 in one of the most cited papers in environmental sustainability. This paper has exercised great influence by being used for policy making purposes by the UN general assembly, the United Nations Environment Programme (UNEP), and the European Commission (Vol). This framework is employed throughout the earth science community, with an updated paper in 2015 (Rockström et al. 2009a: 1; 2009b; Steffen et al.). The planetary boundaries framework is particularly helpful for the see-judge-act model of Catholic action, or any similar process, because it allows one to recognize the scale of the problem and to distinguish and prioritize ecological problems so that individuals, institutions, and

communities can properly engage socially and politically to avert catastrophic ecological degradation.

The planetary boundaries working group identified nine interlinked “biophysical processes that regulate the stability of the Earth system” (Steffen et al.: 1259855-9). There is not only a dynamic interrelationship between systems, but also these systems can operate in non-linear ways. This means a system can be pushed out of balance and cross a threshold where the system produces large changes far past the initial conditions that destabilized it. We have reached a point where the scale of environmental change is such that transgressing one or more of the planetary boundaries can lead to abrupt and catastrophic changes on a continental and even planetary scale (Rockström et al. 2009a: 1).

The human community is generating such large negative changes that if we do not profoundly change our way of living, then we will push the earth system to a new state less hospitable for human civilization, which only emerged during the Holocene epoch (the past 11,700 years) where biophysical processes “stayed within a relatively narrow range” (Rockström et al. 2009b: 472). The planetary boundaries approach adopts the precautionary principle and thus understands the boundaries not as the threshold beyond which there is the possibility of non-linear abrupt change, but as the guard rail within which the human community can likely safely flourish. The nine interlinked biophysical processes are climate change, change in biosphere integrity, stratospheric ozone depletion, ocean acidification, biogeochemical flows, land system change, freshwater use, atmospheric aerosol loading, and introduction of novel entities.

The planetary boundaries expert group not only provides a framework for properly classifying and distinguishing environmental problems (those that have an effect on the earth system), but also provides guidance in prioritizing them. In this framework climate change and biosphere integrity are considered core boundaries because they are the overarching systems within which the other seven biophysical processes operate. In addition, transgressing either one of these boundaries could destabilize the Holocene epoch (Steffen et al.: 1259855-8).

Climate change is the most pressing boundary, and as such is the primary focus here, because the human community must immediately initiate unprecedented reductions in greenhouse gas emissions to avoid locking in cascading impacts that will affect all of the other boundaries. Climate change will drive species extinction and biodiversity loss both for terrestrial ecosystems, including freshwater ecosystems, and ocean ecosystems, and as such is central to the other core boundary (biosphere integrity). The rise in carbon dioxide, which is the primary driver of climate change, is the cause of ocean acidification and this, together with the warming of the oceans from climate change, can cause a mass extinction event in the oceans. Climate change induced droughts will also severely affect the freshwater boundary.

The reason the decisions we make in the coming years will determine the conditions of life for human beings and non-human nature for thousands of years is because of the long life of carbon dioxide, the thermal inertia of the oceans, and the cascading effects that their perduring influence will bring into play. Around 50% of the CO₂ we release is taken up by soils, land vegetation, and the oceans in around twenty five years (Hansen 2013: 10), while

around 25% of it will be affecting the climate after a thousand years, 12% after ten thousand years, and around 7% of it will be affecting the climate a hundred thousand years from now (Archer). Over such long time scales, carbon dioxide's heat trapping potential can set in motion the eventual collapse of ice sheets and other chain reactions (i.e., positive feedbacks) that will substantially increase warming. In addition, most of the energy trapped by greenhouse gases goes into heating the oceans (to date around 90%) (NOAA, 2009: 4). The oceans takes time to heat up (i.e., thermal inertia), and once the deep oceans are heated it takes time for them, and the planet, to cool down. This means that once emissions are stopped, temperatures will remain elevated for around a thousand years (Solomon et al.: 1704).

While CO₂ levels have been much higher than they are now at different times in the earth's history, the increase in CO₂ from 280 ppm to 400 ppm since the industrial revolution is destabilizing the Holocene, which is typified, among other things, by stable sea levels. The terrible truth of this destabilization is being revealed through scientific research, perhaps most notably by two studies from leading researchers (Rignot et al.; Joughin et al.) who maintain that six glaciers on the West Antarctica ice sheet are now in a phase of unstoppable melt that will lead to a sea level rise of 1.2 meters (4 feet). If these studies hold up, this means that we have already condemned to destruction Charleston, New Orleans, Fort Lauderdale, Tampa, Saint Petersburg, and Miami. These estimates do not factor in storm surge damage, which will likely ravage our coasts much earlier. One study suggests that a five-foot sea level rise, which we are likely already committed to when we factor in contributions from Greenland, would bring storm surges like those from Superstorm Sandy to the East Coast every other year (Fischetti). Our coastal cities would be under siege. This level of sea level rise (4 feet) also condemns much of the rice growing regions of Asia to destruction, including 50 percent of the rice fields in Bangladesh (home to 160 million people with projections of 250 million by 2050) and more than half of those in Vietnam (the world's second largest rice exporter) (L. Brown: 7). This will lead to large scale movements of people, likely resulting in conflict as the drought in Darfur led to nearly 300,000 deaths from malnutrition, disease, and conflict and the most intense drought in the history of Syria led to mass migrations of farmers into the cities contributing to the destabilizing of Syria and its descent into civil war (Kelley et al.).

The unstoppable melt from West Antarctica will also, according to Eric Rignot, "likely [a two-thirds chance] trigger the collapse of the rest of the West Antarctic ice sheet, which comes with a sea level rise of between three and five meters [10 to 16 feet]." A sixteen-foot rise would condemn Boston and Houston and reduce San Diego, Seattle, and New York to remnants of their former selves. While Rignot states conservatively that this collapse could take centuries, a subsequent study has shown that over the past five years there has been a doubling of ice mass loss on Greenland and West Antarctica (McKie). While it is too early to see if this trend will continue, Hansen has argued that three to four feet of sea level rise is possible, on our current path, in 50 years, with 16.5 feet possible by the end of the century (Hansen et al. 2016). With "half the world's population living within 60 km [37 miles] of the sea, and three-quarters of all large cities located on the coast" (UNEP), such sea level rise would generate migrations of people that "might make the planet ungovernable, threatening the fabric of civilization" (Hansen 2016: 3799).

Drought will, however, be arriving earlier, indeed the transition to a more arid climate in the U.S. Southwest might already be under way (Seager, et al.). As we continue on our present path there is an increasing likelihood of mega-droughts (NASA 2015), the kind that led to the destruction of past civilizations. If CO₂ levels reach 600 ppm, which could happen by 2060 if positive feedbacks are strong, then the world could be 4°C warmer and 40% to 70% of assessed species could be committed to eventual extinction. In addition, a 600 ppm world (Veron 2009: 1428), with the exceedingly high rates of change that we have seen over the past decades (Diffenbaugh and Field: 490), will likely commit the earth “to a trajectory from which there will be no escape” (Veron 2008: 470) as the warming and acidification of the oceans leads to a collapse of the world’s coral reefs and all organisms who need calcium carbonate to build their shells, including a large part of the plankton in the Southern Ocean. This will likely cause a domino effect that will lead to a mass extinction of ocean ecosystems (Veron 2008).

Climate change impacts will escalate post 2100 and could continue for millennia. In looking at the earth’s history, CO₂ levels (400 ppm) have not been this high for 3 million years (Raymo et al.: 323), when sea levels were between 50 and 80 feet higher than today (Hansen 2013: 6), and then 15 million years ago, when sea levels were between 80 and 130 feet higher than today (Tripathi et al.: 1394). Unless we reduce CO₂ levels from their current 400 ppm levels to below 350 ppm, then it is likely that seas will continue to rise for centuries to millennia. This is one reason the planetary boundaries group maintains that CO₂ levels should be under 350 ppm to ensure a safe operating space for humanity. In terms of mass extinctions, the effects will be felt for millions of years in the terrestrial and ocean ecosystems (see Vernon, 2008: 459).

Carbon Reduction Challenge

James Hansen argues that to meet the 350 ppm CO₂ boundary by the end of the century we must reduce global CO₂ emissions by 6% a year (his starting point was 2013) and remove 367 billion metric tons of CO₂ from the atmosphere over the next 90 years through improved forestry and agricultural practices. If we delay emission reductions until 2020, then we need to reduce emissions globally at a rate of 15% per year (Hansen 2013: 10). To have an idea of the staggering scale of this carbon reduction challenge, it is important to recall that the only time that emission reductions over a ten year period have been more than 1% per year was during the economic collapse (i.e., a halving of the economy) of the former Soviet Union after the fall of the Berlin Wall when emissions declined 5.2% per year (Stern: 231-32). This description of the climate impacts and the unprecedented reductions that are necessary to avoid the worst effects of climate change make it clear why twenty past winners of the Blue Planet Prize (often referred to as the Nobel for environmental sciences) published a synthesis paper for the United Nations Environment Program in which they maintained: “In the face of an absolutely unprecedented emergency society has no choice but to take dramatic action to avert a collapse of civilization. Either we will change our ways and build an entirely new kind of global society, or they will be changed for us” (Brundtland et al.: 7).

While the scale of carbon reductions is unprecedented, we can rapidly move off of fossil fuels while feeding and sustaining a growing population. Mark Jacobsen published two

articles in *Energy Policy* where he argued that we have enough wind and solar in developable locations to power the world fifty times over (Jacobsen and Delucchi 2011a; Jacobsen and Delucchi 2011b). Jacobson argues that we could move the entire world to renewables by 2030, and if we take into account the huge health costs from burning fossil fuels, the renewable energy cost would be relative to the cost of our present fossil fuel energy mix (Bergeron). The central points are that meeting the carbon reduction challenge is possible and that it is possible with existing technology.

The climate problem is not a technological problem, but a political problem. Despite the technological potential to move rapidly to an economy powered by renewable energy and the unfolding catastrophic effects from burning fossil fuels, policies to internalize into the market system the true cost of burning fossil fuels have not been put in place.

Critical Role of the United States

While climate change is a global issue, the United States' historical contribution to the problem is much greater than other countries. It is true that China has surpassed the United States as the largest carbon dioxide polluter in the world. China produced 26% of world carbon dioxide emissions in 2012, the United States produced 14.5%, followed by India at 6.3% (Hansen 2013: fig. 11). This, however, is not the central issue. Since a significant portion of the carbon dioxide that is not absorbed by oceans, land, or vegetation lasts thousands of years in the atmosphere, the central statistic is cumulative historical emissions. On this metric, the United States has emitted 2.5 times as much carbon dioxide as any other country. The U.S. is responsible for 26% of CO₂ emissions from 1750-2012, followed by China at 11%, and India, which is further down in these rankings, is responsible for 3% of emissions, while the whole of Africa is responsible for 2.6% (Hansen 2013: fig. 11). Thus, in this context, U.S. citizens, and, as I will argue, U.S. institutions, including universities, have a particular responsibility when it comes to global climate change.

Comparing the Sustainability Efforts of Catholic Universities to their Mission to Advance Knowledge and Promote Justice (Judging)

Catholic University Sustainability Efforts and the Truth of Our Situation

There is not yet a study providing a representative sampling of the sustainability efforts of Catholic colleges and universities in the United States. This assessment of sustainability efforts on college campuses follows from the general approach of national college and university organizations that address sustainability (e.g., Princeton Review, Association for the Advancement of Sustainability in Higher Education), an article looking at Catholic universities that are excelling in sustainability efforts, my involvement at multiple conferences (usually at those universities that excel in sustainability), and conversations with faculty from other universities. Since the 1980s, in those places that have given attention to sustainability, the focus has been on greening the built environment of the campus, greening the curriculum, and implementing green practices on campus largely centered around recycling with some attention paid to reducing (the often overlooked crucial first step) and reusing. This was the primary approach in the first decade of the twenty-first century and still remains the primary institutional focus today. For instance, the Princeton Review's "Green Guide to College Campuses" rates colleges and universities "on their school's

sustainability-related policies, practices, and programs” (Princeton Review). In addition, the Association for the Advancement of Sustainability in Higher Education (AASHE) “recognizes colleges and universities that have achieved the greatest level of success with green initiatives on-campus and within their surrounding communities” (BestColleges.com). When one looks at those colleges who are recognized, however, the dominant focus is on greening the campus. Furthermore, “green initiatives in the community” are more involved with local community projects that address various “green activities.” Thus the focus is on particular changes and not systemic changes.

In an article on the efforts of Catholic colleges and universities, which was not a representative sampling because it chooses universities that were seen as excelling in terms of sustainability, the “environmental revolution” on college campuses centered around reducing, reusing, and recycling, includes reduction of campus waste, recycling and trash clean-up projects, tree planting, street clean ups, recycled-fashion shows, composting, banning plastic water bottles, and rain gardens to filter water run off before it enters the local stream. There were also competitions between dormitories to reduce energy use along with institutional efforts to meet carbon neutrality goals over the next 35 years through retrofitting older buildings, changing to more energy efficient lighting, and installing solar panels. The green initiatives on campus were also matched by greater emphasis on treating environmental issues in the classroom, including extending educational efforts to the wider community through speakers and conferences on environmental issues. One professor articulated a common assumption on the ultimate social role of universities, “if our graduates aren’t the ones to be able to go out and do it [i.e. change the world], I am not sure who we expect to” (Bahr).

Colleges and universities have at the heart of their missions rigorous inquiry into the truth of things. The sustainability efforts of college and universities, then, should correlate with the truth (converging lines of evidence) of the ecological crisis. The planetary boundaries framework has been employed here because it is an influential framework that allows us to distinguish and prioritize ecological problems with a clear sense of the scale of the problem so that individuals, institutions, and communities can effectively engage in the transformation necessary to avoid transgressing these boundaries. Many of the sustainability efforts on campus touch upon planetary boundaries: reducing the use of plastics through ban the bottle campaigns (novel entities boundary), rain gardens to filter water run off before it enters the local stream (fresh water and biosphere integrity boundaries), paper recycling (land use and climate change boundaries), tree planting (climate change), and energy reduction efforts (climate change and novel entities boundaries). In light of the scale of transformation necessary (“build an entirely new kind of global society”; Brundtland et al.: 7) and the timetables necessary to avoid irreversible catastrophic effects, such efforts in their campus-centric focus are insufficient. In addition, many of the efforts are not sufficiently addressing the core boundary of climate change in a manner that is in line with the immediate necessity for unprecedented greenhouse gas reductions.

As we have seen in Hansen’s analysis, a few years delay (from 2013 to 2020) moves the carbon reduction challenge from 6% to 15% annual global CO₂ reductions. 15% annual reductions in global CO₂ emissions would require a social transformation akin to the mobilization for World War II. These numbers undercut the assumptions operative in the

educational and campus sustainability efforts at colleges and universities; namely, that the social transformation to avoid catastrophic ecological impacts will be achieved as students who have gained knowledge, lived in a culture of sustainability, and engaged in sustainable practices on campus will become leaders in society and will affect the necessary social transformation to avoid ecological degradation. By the time students have entered serious leadership positions in society, it will likely be too late to avoid multi-meter sea level rise, the dustbowlification of large swaths of the arable land across the planet, and the commitment of most of the world's coral reefs to destruction with the cascading effect of a mass extinction of ocean ecosystems (Veron 2008, 2009).

Furthermore, this view presumes that educating individuals provides them with the power to be transformative agents in society. A study by Martin Gilens and Benjamin Page, however, has shown that “ordinary citizens have virtually no influence over what their government does in the United States. And economic elites and interest groups, especially those representing business, have a substantial degree of influence. Government policy-making over the last few decades reflects the preferences of those groups – of economic elites and of organized interests” (Gilens, interviewed in Kapur). As their study maintains, “when a majority of citizens disagrees with economic elites and/or with organized interests, they generally lose. Moreover, because of the strong status quo bias built into the U.S. political system, even when fairly large majorities of Americans favor policy change, they generally do not get it” (Gilens and Page: 576). The lack of correspondence between government policies and public opinion is also evident regarding climate change. A 2010 poll conducted by John Krosnick showed that 74% of Americans thought the earth's temperature probably had been heating up over the last 100 years, 75% thought that human behavior was substantially responsible for any warming that has occurred, and 76% favored government limiting business's greenhouse gas emissions. While Congress has yet to enact climate legislation, Krosnick's “two decades of asking Americans about climate change has turned up consistent support for action to rein in global warming” (Morrison).

In an Unprecedented Emergency, Universities Must Operate in Unprecedented Ways

While universities recognize their social function, that social function is almost exclusively understood in terms of the education of students and the advancement of knowledge. In this unprecedented emergency, however, all institutions, including university communities, must be open to thinking and acting in unprecedented ways. In light of the fact that we now have a situation in which the business model of many of the world's largest corporations is in direct conflict with the climactic conditions in which human civilization (and most species) emerged, Bill McKibben's organization, 350.org, launched a divestment campaign in 2011. While divestment campaigns are spreading rapidly among foundations, institutions, and universities, as of March of 2015 only 28 of the 4,706 (National Center for Educational Statistics) two and four year colleges and universities have divested and only two (University of Dayton and Georgetown, which only divested from coal) of the 249 Catholic Colleges and Universities in the U.S. have divested (Hirji and Douglass). This campaign has led to the drawing of clear moral boundaries on profiting from fossil fuels and has forced leaders in communities, in this case primarily university presidents and administrators, to have to publically justify profiting from fossil fuel companies that threaten the future of the

young people at the heart of their universities' mission. It has forced into the public sphere the fundamental contradiction of an economy fueled by fossil fuels. The fossil fuel divestment movement has not only brought into relief the ethical implications of profiting from fossil fuels, but has also raised the financial argument that investing in fossil fuels is a very risky business because the stock valuations of fossil fuel companies is dependent upon their existing reserves. If those reserves are not burned, then fossil fuel company stocks would be left with stranded assets and their stock prices would plummet. While the divestment campaign has indirectly broadened the horizon of concern for universities since it is about divesting from multi-national companies on moral grounds, it is still not direct engagement in politics. It is an argument for the moral integrity of the university.

Universities as Pillars of Support and the Problem of Structural Evil

In addition to more universities divesting from fossil fuels, what is needed now is for universities to go a step further than the divestment movement and directly engage in public life. This is particularly true of Catholic universities in light of the long history of Catholic social teaching that has now been thoroughly applied to the ecological crisis in Pope Francis's encyclical *Laudato si'*. Directly engaging in public life requires a fuller recognition of the social character of universities and the responsibilities this conveys upon them. In his work analyzing political power, Gene Sharp maintains that "the most important single quality of any government, without which it would not exist, must be the obedience and submission of its subjects. Obedience is at the heart of political power" (Sharp 1973: 16). For Sharp, the weakening of a particular oppressive ruling regime or system requires that citizens must work to transform those institutions in society that act as pillars of support for the system.² According to Sharp, "pillars of support are institutions and sectors of the society that supply a regime (or any other group that exercises power) with the needed sources of power to maintain and expand its power capacity" (2005: 451). Pillars of support include, but are not limited to, religions, universities, media, commercial institutions, and non-profit organizations.

Universities in the U.S. context are pillars of society by the fact that they are respected institutions that tend to be deeply rooted in a particular community. Universities are not neutral institutions, simply retrieving wisdom from the past and discovering and disseminating new knowledge in the present. Since they are inherently social and political, universities will either reinforce or transform the social and political systems in which they are imbedded.

When the university does not challenge those structures as a university, not simply particular members of the university, the university inevitably reinforces the system. Thus the university community falsely assumes that it can pursue the truth and educate students only if it is apolitical and neutral. Yet in terms of climate change and the other planetary boundaries, through its silence it tacitly supports an evil structure that systematically undermines those boundaries. As Jon Sobrino maintains, "in the political realm, universities

² While Sharp's theory of power with its division of power between rulers and subjects is not adequate to the full complexity of political life in the U.S. system, his understanding of power remains an instructive heuristic for informing one's analysis of power in a particular political system (see Martin).

have, by their silence or their explicit support, not hindered, much less stood in opposition to, inhumane practices that are grave violations of freedom and the most fundamental human rights” (Sobrino: 281).

Universities as institutions must address structural evil and distortion to come to the truth of the present historical reality. “We always,” according to Dean Brackley, “find ourselves surrounded and assaulted, even drugged, by lies and distortions about the world we live in. Each of us and all of us necessarily put our world together in a way that both reveals truth and at the same time distorts it.” And this distortion “has both personal and institutional dimensions. . . . Although not always conscious and malicious, distortion is hardly capricious. It serves particular interests and institutions. It systematically masks social reality, especially in the interests of the powerful. The search for truth, therefore, is a conflictual struggle to overcome conscious lies and less-than-conscious distortions.” Thus “educators cannot afford to ignore the pervasive, massive reality of distortion. Liberal culture portrays the search for truth as a relatively simple task of pushing back the frontiers of ignorance” (Brackley: 9). There has probably been no more consequential distortion of truth than the confusion and doubt regarding climate change that was generated, since the early 1990s, by fossil fuel interests and conservative think tanks (Oreskes and Conway; Jacques).

An example of viewing the search for truth as a task of pushing back the frontiers of ignorance can be seen by the fact that climate scientists, by and large, until very recently have stayed on the sidelines. They were content to do their research guided by the canon that a scientist should “never transgress the red line between pure analysis and moral issues” (Yardley and Goodstein) in order to avoid the appearance of compromising their objectivity in conducting their scientific work. In addition, many scientists thought that as long as they continued to do their research and the evidence regarding the threat of catastrophic climate change came into clearer focus, then political leaders as representatives for the good of society would formulate policies to reduce greenhouse gas emissions and mitigate the threat of climate destabilization (see Hansen 2009). What has happened instead is that fossil fuel companies and conservative think tanks actively worked to sow doubt regarding the reality of global warming. Sadly, the country with probably the most active publishing climate scientists, the United States, is the country that has exported more misinformation through the efforts of its conservative think tanks and is the country most responsible for global inaction on climate change. Climate scientists do not deserve blame for our predicament and many of them are acting heroically, in the face of harassments and threats, to sound the alarm regarding the planetary emergency; nevertheless, their delay in speaking directly to the public is representative of a certain naivety, that runs through sections of the academic community, regarding the great capacity in our society for distortion.

Planetary Boundaries and Catholic Universities: Proposals for Social Engagement

In light of Sharp’s notion of pillars of support, let me offer several examples of how the Catholic university can use the power granted to it as a university for the good of society and move out of a bystander role that gives tacit approval to the structures that are causing the planetary emergency. First, Catholic universities should engage their board of trustees. One indication of the respectability of universities is that many prominent business and civic

leaders are members of the board of trustees of local colleges and universities. Being a board member at a college or university is a public honor. These are people who are part of the university community. While not all board members are Catholic they need to be properly educated in the core beliefs of the Catholic Church, including Catholic social teaching, and especially *Laudato si'*. In addition, they need to be informed of the unfolding ecological tragedy and that the ethical demands placed on universities is not limited to Catholic universities; rather, there is a consensus among all mainstream ethical theories regarding what must be done by individuals and institutions to meet minimal standards of justice in the context of the unfolding climate change tragedy (D. Brown: 195-211). The presidents of Catholic universities should facilitate conversations and reading groups between board members and faculty working on the many facets of the ecological crisis.

Second, universities should draw upon the expertise of faculty to use all the tools at their disposal to educate their alumni in an analogous, albeit less comprehensive, way. This could be achieved, for example, through offering free evening mini-courses on *Laudato si'* and the scientific evidence concerning climate change. The context for these lectures would be continuing education for alumni on the Catholic mission of the university in the contemporary world. These lectures would take place on campus, but they could be taped and archived so that they could be available to alumni around the country. The university would have to commit to vigorously promoting such lectures for them to reach a wide audience.

Third, universities should work to establish alliances between local hospitals, important for-profit and non-profit entities, the local Catholic diocese, religious leaders from other Christian communities, and other faith traditions (all of which have issued statements regarding the moral requirement to act to avoid the worst of climate change; see Yale Forum). They could, then, through these alliances, enter into dialogue with local, state, and federal political leaders to educate them about the reality of climate change and the moral consensus among ethical theories that climate change must be addressed (see D. Brown). Here again the university could draw upon faculty expertise in climate science and environmental ethics to make a social contribution. Where there is a lack of knowledge among political leaders, they can be further informed. Where there is a disregard for norms for weighing scientific evidence and a disregard for ethical norms, having representatives of major institutions (i.e., the pillars of society) at the table with a particular political leader will send them a signal that pillars of their political support are actively moving away from their policies, which are contrary to the good of society.

Fourth, on a national level Catholic colleges and universities, possibly through the Association of Catholic Colleges and Universities, could engage the 138 Catholic members in the House of Representatives (32% of the House), 63 of whom attended Catholic colleges and universities, and the 26 Catholic members in the Senate, 15 of whom attended Catholic colleges and universities. The university would not advocate for any particular legislation, but would simply advocate for the truth; namely, that public figures use all the tools at their disposal to educate the public about the climate threat and that policies should be enacted such that the true price of greenhouse gas emitting activities like burning fossil fuels, producing food, logging, etc., are reflected in the economy.

Fifth, universities along with other pillars of society could sign onto amicus briefs (friend of the court briefs) in lawsuits that are being brought against the Federal Government for not sufficiently addressing ecological problems, most especially climate change. In particular, Catholic universities could sign amicus briefs for the Our Children's Trust federal lawsuit, perhaps the most hopeful prospect for climate action in the United States, and state lawsuits filed by young people arguing that the federal government is violating their civil rights by not addressing climate change in line with the science (Holthaus). There is already precedent for this type of action as thirty Catholic organizations, including several universities, filed an amicus brief to defend the Obama Administration's Clean Power Plan (Morales). This would likely require university committees who could quickly identify important lawsuits and obtain the signing approval of high level administrators on a tight timeline.

Sixth, the Catholic university could engage another central pillar of society, the media. The university acting on its own, or even more effectively acting with an alliance of other pillars of society, could enter into dialogue with the major local news organizations to request that the truth distorting practice of providing false balance (see Boykoff and Boykoff) must be dropped and that the quality, number, and placement of news stories regarding climate change must reflect the level of threat that climate change represents to society. The university community could initiate a partnership with media organizations, whereby faculty with relevant expertise could regularly be guest authors addressing political, social, and economic issues, policies, and structures that relate to the planetary emergency.

Seventh, on a national level Catholic colleges and universities, possibly through the Association of Catholic Colleges and Universities, could meet as representatives of Catholic universities or together with other university associations like the American College & University Presidents' Climate Commitment (ACUPCC) with executives of News Corp, the parent corporation of Fox News, and other major national cable (CNN, MSNBC) and network news programs (ABC, CBS, NBC), including public television. This would also involve meetings with editors of major print media in the United States, including the *Wall Street Journal*, *USA Today*, etc. There is precedent for this: the tobacco industry met with major newspaper editors in 1954 to object to scientific findings that smoking was harmful to health (Oreskes and Conway: 16). This greatly affected coverage of the dangers of tobacco over the ensuing decades.

In these proposed initiatives the university would be engaged in defending norms of distributive and procedural justice on behalf of its students and all humanity. Distributive justice requires that the benefits and harms associated with the burning of fossil fuels are distributed equally. In the present context, the benefits have gone to previous generations and the present older generations, especially in the developed world, while the harms will be coming to the poor, young people, and their future offspring. Procedural justice in reference to climate change means that those who are being subjected to the risk of climate destabilization must be fully informed of those risks and must consent to those risks. The failure of the media to properly inform the public over the past several decades has been a violation of procedural justice. In engaging the media, the university will be creating social conditions for procedural justice for its students and the rest of society.

Conclusion

In these actions, Catholic universities would show a true commitment toward their students by leveraging the universities' power as a pillar of society to create conditions that lessen the possibility of a catastrophic future for young people. This reverses the common presumption that the social functions of universities are limited to the production of new knowledge through research and the education of students who will go onto make the necessary transformations in society. The position I have advanced calls for a more expansive social role for Catholic universities such that they actively and directly engage in leveraging their power, in a manner fitting of a university, in the service of creating conditions for a society more aligned to norms of evidence (truth), minimal ethical norms found in the overlapping consensus of all mainstream ethical theories, and hopefully a society more consonant with the principles of Catholic Social teaching (the good). Only such a robust engagement in society is in line with the truth of our situation and the mission of Catholic universities.

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