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Journal of Management for Global Sustainability Volume 5, Issue 1, 2017

LAUDATO SI'



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POPE FRANCIS, LAUDATO SI', AND INTEGRAL ECOLOGY PERSPECTIVES ON A CRITICAL ISSUE

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INTRODUCTION

The editorial in the first issue of this journal indicated an important criterion for accepting papers for publication, that is, whether the scholarship provides an affirmative response to the question "Will reading this paper assist others in aiding the effort to move to a more sustainable world?" (Stoner, 2013). For the five articles in this issue, I think the reader will answer in the affirmative—while they share a set of common concepts and concerns, each provides a different view of the problems, attendant consequences, and remedies related to our lack of an integral ecology.

The articles also share at least one other theme: the observation that too few people are influencing the fate of the earth. By controlling wealth and the policy process, a small elite is pursuing policies that challenge the sustainability of the planet. Indeed, attending to this concentration of power, influence, and wealth in the hands of the few has been at the center of social and Church policy since the second half of the 19th century (beginning with Leo XIII's *Rerum Novarum*). Pope Francis is hardly the first pope to lobby on behalf of those on the margins—papal documents have steadily moved toward supporting working people, recognizing their right to work, earn a living wage, and organize. The Holy Father thus continues this process of linking the social, economic, and political worlds to the spiritual world, a course of action which the articles published here demonstrate all too well. As a matter of fact, as will be argued in the conclusion of this editorial, these studies make clear that much more scholarly work and involvement in the workaday world

is needed if we hope to contribute constructively toward increasing the sustainability of our world.

One other concept deserves mention here: since the late 19th century, papal documents have argued for increased use of the principle of subsidiarity—the notion that decision-making should be pushed down to the lowest level of organization possible. Along with the principle of participatory democracy, its parallel concept in the secular world, subsidiarity argues for the dignity of humankind. By looking at new management models, the articles in this collection therefore demonstrate how and why these principles are important and suggest how they might contribute to an integral ecology.

REACTION TO THE ENCYCLICAL

Francis's encyclical *Laudato Si'* precipitated a great deal of academic and popular interest when it was released in June 2015. Some thought it was long overdue; others critiqued Francis for writing about something they believed he was ill-prepared to discuss, namely sustainability (Fleming, 2016). Among the latter, some elected to personalize the criticism while others attacked the scientific and theological foundations of the document. In a paper published by the Global Warming Policy Foundation, for example, Forster and Donoughue indicate that 90 percent of the media coverage focused on climate change yet note that only ten percent of the document actually addresses that topic. They take issue with Francis on six points: poverty, fossil fuels, markets, science and consensus, adaptation, and the precautionary principle. For them,

the encyclical is coloured too much by a harkening for a past world, prior to the Industrial Revolution, which is assumed to have been generally simpler, cleaner, and happier. There is little historical evidence for such a vision, and for most people then life was brief, painful[ly] poor, and even brutal. (Forster & Donoughue, 2015).

Yet while the document did receive criticism for sins of both commission and omission, the legitimacy of these assessments should be viewed in context nevertheless. Francis was overturning long established beliefs that the earth was to be subdued rather than nurtured and cultivated. He is a new standard bearer for some—in the preface to a compendium of articles on integral ecology, John B. Cobb, Jr. says:

The pope's primary audience was not the elite in the church or in the wider world. He addressed the world's people. And millions have resonated [with]

Francis' call. Before then, we had scores of leaders working for rational change, and therefore, effectively, no leader at all. Now the cause of LIFE has a champion who cannot be ignored. (Cobb & Castuera, 2015: iv–v)

Despite the fanfare raised lauding the document as a new manifesto, however, Thomas Rausch cautions that "this long anticipated document is not primarily about climate change as is so often alleged, although climate change is one of the Holy Father's concerns" (Rausch, 2017: 135). Rather, it is a document which calls all to protect our "common home" in the image and likeness of the Creator. One approach to that end, as many of the authors here indicate, is the pursuit of an integral ecology.

Francis thus adds new dimensions to the sustainability dialogue which elevate the debate from simply being an issue of waste and misuse to one of respect for God's creation and all its elements. He is extending the thought process of Leo XIII when the latter called attention to the plight of labor, indicating that workers, as children of God, have rights and should not be used solely as means to an end. Like Leo, Francis feels an obligation to speak on behalf of the disadvantaged and stresses the importance of the principle of subsidiarity: decisions affecting the lives of the many should be resolved within those bodies (at the lowest organizational level possible) and not automatically by the privileged. A former archbishop of Canterbury, Rowan Williams clarifies the significance with these words:

The argument of these opening sections of *Laudato Si'* repeatedly points us back to a fundamental lesson: We as human beings are not the source of meaning or value; if we believe we are, we exchange the real world for a virtual one, a world in which—to echo Lewis Carroll's Humpty Dumpty—the only question is who is to be master. A culture in which managing limits is an embarrassing and unwelcome imperative is a culture that has lost touch with the very idea of a world, let alone a created world (i.e., one in which a creative intelligence communicates with us and leads us into meanings and visions we could not have generated ourselves). (Williams, 2015)

Like Leo XIII, Pius X, John XXIII, and pontiffs after them, Francis is asserting the obligation of the Church to ensure the well-being of all of God's creation. He is reiterating the belief that this is a "created world."

Each of the articles in this issue provides a unique perspective on Francis's encyclical. Each includes insights that readers can ponder and assess. Each recognizes that Francis adds new dimensions to the role of the Church in addressing global unsustainability. Each perceives that part of the solution is the development of a new paradigm for sharing earth in respect for the Creator. All realize that Francis is doing more than just adding to the foundations laid by his predecessors (from Leo XIII to Benedict XVI) for treating our common home with respect and wonder, that while climate change and unsustainability are important elements of the encyclical, they are symptoms of an integrated, systemic, and global problem begging for a solution in a created world.

LAUDATO SI' AND INTEGRAL ECOLOGY: A RECONCEPTUALIZATION OF SUSTAINABILITY

In "Laudato Si' and Integral Ecology," Imanaka, Prussia, and Alexis use the lens of Roman Catholic social thought to extend "the focus of sustainability to include social justice through its emphasis on human dignity, the common good, and *caritas*" (p. 39). While the article calls attention to how some businesses misrepresent their sustainability practices despite generating unsustainable consequences, its primary focus is demonstrating how the underlying tenets of Roman Catholic social teaching can build bridges between important concepts in the sustainability literature such as human ecology, peace, and ecological conversion. They thus reconstruct the sustainability framework through the notion of integral ecology.

In connecting Roman Catholicism to sustainability, Imanaka and her coauthors draw from the work of the Saint Kateri Tekakwitha Conservation Center. They indicate that the Center, which has been developing a systematic Roman Catholic perspective on sustainability, adapted and refined the seven themes of ecological responsibility originally developed by the U.S. Catholic Bishops. As a useful checklist for trying to understand the foundations of a Roman Catholic rubric on sustainability, these principles bear repeating here:

- 1. [a God-centered and] sacramental view of the universe [which grounds human accountability for the fate of the earth];
- 2. a consistent respect for human life, which extends to respect for all creation;
- 3. a worldview affirming the ethical significance of global interdependence and the global common good;
- 4. an ethics of solidarity promoting cooperation and a just structure of sharing in the world community;
- 5. an understanding of the universal purpose of created things, which requires equitable use of the Earth's resources;
- 6. [real choices for the poor], which [give] passion to the quest for an equitable and sustainable world; and

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7. a conception of authentic development[,] which offers a direction for progress that respects human dignity and the limits of material growth. (p. 45)

For the staff of the Center, these themes provide a good starting point for principles that can guide a Roman Catholic perspective on sustainability as developed in *Laudato Si'*.

The authors also contribute a model of integral ecology that demonstrates "how the concept of integral ecology is related to both the secular sustainable development paradigm and prior teachings on the environment and justice in CST" (p. 54). They argue that integral ecology is an antidote to unsustainable business practices.

In an article prepared for the 10th Whitehead International Conference and published in *For Our Common Home: Process-relational Responses to Laudato Si'*, Clugson and Gore indicate that *Laudato Si'* challenges us to implement three major shifts:

From narrow anthropocentrism to integral ecology, centered on the common good and the interconnectedness and dignity of all life.

Toward a just and equitable social order, emphasizing a new bottom line for development that replaces economic growth and short-term gain (GDP) with fuller measures of personal and planetary well being.

Toward a true global collaboration—a social movement that is not about conversion but convergence grounded in shared global ethics. (Clugson & Gore, 2015: 202)

This lay perspective provides insights for developing a working definition of integral ecology and is consistent with the principles refined by Imanaka et al., whose viewpoint is definitely informed by Ignatius's *Spiritual Exercises* and offers a distinctly Roman Catholic (and perhaps even Jesuit) perspective on sustainability.

INEQUALITY, DIGNITY, AND THE SUSTAINABILITY CHALLENGE

Sandra Waddock explores alternatives to current economic models through the concept of inequality. Like many of the other contributors, she identifies how the lack of sustainable business practices creates greater gaps between the haves and the have-nots, and demonstrates how climate change has a diverse impact on people across different social and economic classes. Citing a 2014 IPCC document, she builds a sustainability link to inequality: "Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development" (p. 66, citing IPCC, 2014: 13). She also cites Francis's insight: "Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature" (p. 66, citing Francis, 2015: no. 139).

Waddock sees inequality as a systemic issue. She observes, for instance, that poverty too often has the consequence of violating the dignity of the poor, and that disparities in wealth on a global level are leading to a shrinking middle class and a jobs crisis. Waddock thus introduces efforts by the U.N. to address goals that are designed to discourage inequality and injustice and slow climate change.

Waddock's review of the impact of current business practices also leads her to consider alternative theories of doing business. A major goal of such ideas is to redefine the meaning of success, of which wealth maximization and profitability have long been the measure. The new business and economic models that Waddock pursues aim to change our choice of measures in favor of strategies that are more compatible with sustainable practices.

One consequence of such alternative models, for example, would be more broad-based involvement in decision-making, which in turn would contribute to the development of a more egalitarian decision calculus. It would also encourage recognition of the shared nature of economic, political, and social themes which is wholly consistent with Francis's call for respect and human dignity.

LAUDATO SI' AND THE PAPAL VIEW OF ECOLOGICAL DEBT

This study focuses on a more specific, and perhaps more contentious, topic compared to most of the other contributions. Chipalkatti, Rishi, and Lobo use the concept of ecological debt to introduce their treatment of *Laudato Si's* critique of countries in the northern hemisphere, an idea that stems from a picture of the economics between the global North and South as presented in paragraph 51 of the encyclical. The authors observe that

in [Francis's] view, over-consumption on the part of the global North has led to a disproportionate use of natural resources extracted from the global South, resulting in local environmental damage for the latter. The debt thus arises when raw materials are exported from poor nations (South) to rich nations (North) to satisfy the latter's appetites. (p. 86)

They then assess the Pope's statement by providing a historical perspective on the concept of historical debt before moving on to evaluate the indictment of MNCs using the pollution haven hypothesis and empirical data.

Chipalkatti et al.'s historical treatment of ecological debt includes a short history of the concept as used by South American intellectuals and political leaders. They also use a working definition developed at Ghent University that points to three different patterns of ecological damage:

- 1. the ecological damage caused over time by country A in other countries or in an area under jurisdiction of another country through its production and consumption patterns, and/or
- 2. the ecological damage caused over time by country A to ecosystems beyond national jurisdiction through its consumption and production patterns, and/or
- 3. the exploitation or use of ecosystems and ecosystem goods and services over time by country A at the expense of the equitable rights to these ecosystems and ecosystem goods and services of other countries or individuals. (Goeminne & Paredis, 2010: 697)

The authors then argue that Francis's encyclical has reinvigorated the discussion.

From their historical analysis, four methods for estimating ecological debt are discussed. One measure is "the amount of ecological damage caused over time by a country, through its production and consumption patterns, in ecosystems beyond its natural jurisdiction" (p. 91); indeed, a summary of their findings states that "our results demonstrate that this assertion is empirically valid for our sample of commodity exporting developing countries" (p. 98). The authors then make several recommendations for mitigating the negative impact of processes and policies that encourage ecological debt.

LAUDATO SI'

Fr. Rausch's article is a more traditional analysis of the encyclical. He approaches the document chapter by chapter while addressing the question "What is happening to our common home?". He notes in his first section the consequences of the abuse suffered by the earth and its ecosystems. He reiterates that what Francis is calling attention to is not new, and notes that Paul VI, John Paul II, and Benedict XVI also called for efforts to reduce greenhouse emissions and assist those most affected by the harmful effects of climate change. Yet of particular importance in the first chapter of *Laudato Si'* is Francis not claiming to have all the answers; rather, he calls for collaboration and deliberation in addressing climate change. He leaves the door open rather than suggesting dogma.

Like the other authors, Rausch makes a point out of the Pontiff's broadening concept of the planet: "Francis argues that the Bible has no place for a tyrannical anthropocentrism at the expense of, or unconcerned for, God's other creatures..." (p. 138). He also echoes the feelings of others when he points out what Peter Cardinal Turkson indicated—that the word "stewardship" is rarely used in the document in deference to the word "care." That emphasis points to how Francis's document and the Church are moving further away from an anthropocentric view of the word.

Commenting on integral ecology as discussed in the encyclical, Fr. Rausch stresses "that as human beings we belong to one single human family, dependent on each other and on the earth that is our common home" (p. 140). An integral ecology thus needs to be characterized by new definitions of terms like "sustainable use," for instance, which "means considering each ecosystem's regenerative ability" (p. 141). Here Rausch observes, as with many others, that Francis is challenging all to a profound conversion, to a change of lifestyle, one for which the concept of integral ecology once again provides an organizing principle. As the author remarks, quoting from the encyclical, "a true ecological approach *always* becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor*" (no. 49), especially since the poor are most affected by a changed environment.

In later paragraphs, Fr. Rausch addresses fears expressed by critics in discussing Francis's treatment of technology and of terms such as "free market" and "profit-driven economy." He reminds us that Francis is "calling not for an end to capitalism but for a spirituality more sensitive to our hurting planet" (p. 142). Again, one is reminded of the *Spiritual Exercises* as an integrating element of the process that brings us closer to an integral ecology.

THE PAPAL ENCYCLICAL LAUDATO SI': A FOCUS ON SUSTAINABILITY ATTENTIVE TO THE POOR

In the first sentence of their article, Kennedy and Santos quote reactions to *Laudato Si'* from the *Financial Times* of London and *The Guardian*. They note that these major news outlets refer to *Laudato Si'* "as one of the most significant events in the modern environmental movement" and something "the world should pay attention [to]" (p. 110). Indeed, the author of the preface to a collection of articles on integral ecology echoed such praise when he stated that "we [the members of the conference] resolved to merge our little movement into the great one we hope Pope Francis will lead" (Cobb, 2015: v). Such comments surely testify to the impact of Francis's message, and indicate that not all businesspersons found it threatening, ignorant of the facts, or objectionable. In fact, Kennedy and Santos's article attempts to demonstrate how alternative business models can move the world closer to the Holy Father's concept of a just society.

The authors first show how the Dominant Social Paradigm (DSP) fails to support global sustainability goals, and then contrast it with the New Ecological Paradigm (NEP) which calls for a more eco-centric and holistic view of the world. They evaluate and view programs developed by organizations like the OECD, the UN Global Compact, and the Caux Roundtable as small steps in the right direction, as efforts to moderate business excesses, but consider them to be too anthropocentric. They note Kilbourne's conclusion that "real change in environmental behaviors has not occurred even with a heightened concern about the environment" (p. 111, citing Kilbourne, 2010).

Kennedy and Santos conclude that the base assumptions of the DSP and NEP are considerably different. For the DSP, they discuss four identified assumptions based on Catton & Dunlap (1980):

- 1. that human persons are independent and inherently different from nature, and so are dominant over it;
- 2. that they are in control of their own futures;
- 3. that the world has unlimited potential for creating opportunities for human persons; and
- 4. that human progress can be maintained by human ingenuity, often in the form of technology. (p. 114)

Rejecting the notion that the DSP can support a more sustainable future, they then focus the rest of the article on comparing the assumptions of the NEP with *Laudato Si'* and discussing how principles derived from the NEP and *Laudato Si'* can better address the shortcomings of the current environmental situation. These careful comparisons build links to Roman Catholic social thought and demonstrate that while Francis's encyclical is critical of business, he himself is not hostile to it. The authors conclude that *Laudato Si'* puts the poor and marginalized at the center of the ecological debate.

THIS ISSUE OF THE JOURNAL IN CONTEXT

In reflecting on the articles in this issue of the *Journal*, it seems appropriate to keep in mind that Francis did not deliver his encyclical as an instrument of dogma. He was sharing a sincere concern for the future of the planet, one inclusive of all of Creation. He was speaking as a spiritual leader who had not only studied but also listened for years to experts and the representatives of people at the margins. He encourages dialogue throughout the document, not confrontation, and appears to see his role as that of a cautious and compassionate mentor. The Holy Father is speaking of aspirations.

One principle both critics and supporters have latched onto is that of subsidiarity. Critics of the Pontiff's efforts who come from the religious right, for instance, see Francis's work as systematically inconsistent with the teachings of popes since Leo XIII. They argue that the Roman Catholic concept of subsidiarity stresses the idea that governments (and central ones especially) should not attempt to redistribute wealth, provide for medical care, or interfere with the right to property (DePrisco, 2017). Protagonists like David Bosnich, writing through the Acton Institute, argue, for example, that the United States Catholic Bishops are distorting the fundamental arguments of subsidiarity by encouraging state sponsored health care. He observes that

this is why Pope John Paul II took the "social assistance state" to task in his 1991 encyclical *Centesimus Annus*. The Pontiff wrote that the Welfare State was contradicting the principle of subsidiarity by intervening directly and depriving society of its responsibility. This "leads to a loss of human energies and an inordinate increase of public agencies which are dominated more by bureaucratic ways of thinking than by concern for serving their clients and which are accompanied by an enormous increase in spending." (Bosnich, 2010) Such opinions expose the divisions and very different perspectives adopted among Roman Catholics, let alone among non-Catholics. They demonstrate just how divided people are over sustainability and many other related topics, e.g., universal health care, limiting access to coastal zones for oil exploration, etc. Indeed, the idea of government-sponsored or -aided efforts at sustainability can be tantamount to heretical behavior for some. DePrisco, for example, interprets as direct violations of papal teaching the same papal encyclicals that seem to support state sponsored assistance for the marginalized or regulations that might threaten aspects of private property ownership and usage. He quotes Leo XIII to bolster his argument against threats to private property that may level the playing field:

Let them, however, never allow this to escape their memory: that whilst it is proper and desirable to assert and secure the rights of the many, yet this is not to be done by a violation of duty; and that these are very important duties; not to touch what belongs to another; to allow everyone to be free in the management of his own affairs; not to hinder any one to dispose of his services when he please and where he please. (Pope Leo XIII, as quoted in DePrisco, 2017)

DePrisco interprets the words of Leo XIII as existing in the same historical context as today, yet the Pontiff back then was guarding a very different type of challenge to property rights compared to Francis he was concerned, in part, with government absorption of industrial property. Indeed, Francis himself, like Leo XIII before him, is also concerned with human dignity in the context of Creation. Both of them needed to address the consequences of increasing inequalities in income and wealth. Leo, however, did not have to contend in 1891 with the social, political, and cultural forces that Francis faces today.

As members of a select group of educators, we can support the Pontiff by ensuring that our institutions are incubators for the minds of generations who will have to live with, and overcome, the consequences of the continued pursuit of unsustainable practices. This task will not be an easy one: as the articles in this journal indicate, reform will require major cultural changes throughout the world, yet our current social, economic, and political systems are not designed to promote long-term transformations. By linking the argument to religious values, the Pontiff recognizes that these issues are complex and require philosophical and theological underpinning to justify the types of analyses and actions that are needed. It is fortunate, then, that the authors of these articles have contributed mightily to that effort. They have cracked the surface of a set of problems that resemble a layer cake. Yet they—and all of us—will need help. What can Jesuit institutions do to assist? Many of us view our educational efforts as important tools for creating a mindset that can see less obvious solutions. One wonders to what degree that assumption is correct. In an article entitled "On Educational Reform," Marcus Ford discusses the cultural reforms required to address the problems of unsustainability. He says that "we must replace our consumer culture with a culture that 'encourages a prophetic and contemplative lifestyle, one capable of deep enjoyment free of the obsession with consumption'" (Ford, 2015: 270–271).

Ford also addresses the inadequacies of our current educational model. First, he observes that "humans are a part of an ecosystem that has meaning and worth quite apart from the worth it has to human economy" (Ford, 2015: 271). He then notes that "transitioning from our current culture of economic progress and individualism to an ecological culture presents what Pope Francis terms an educational challenge (209)" (Ford, 2015: 271). Ford cites Francis:

The specialization which belongs to technology makes it difficult to see the larger picture. The fragmentation of knowledge proves helpful for concrete applications, and yet it often leads to a loss of appreciation for the whole, for the relationships between things, and for the broader horizon, which then becomes irrelevant. (Francis, 2015: no. 110)

Ford also extends his argument by observing that our public and private universities are not equipped to provide this "holistic, transtechnical, ethically infused education" (Ford, 2015: 271). Furthermore, "if they are to provide what is needed, they will have to take a new form, embrace a new mission, and adopt a new worldview. As it currently exists, higher education is a major part of the problem that needs to be solved" (Ford, 2015: 271–272). He then extends the observation by saying that we need "colleges and universities that value and encourage wisdom as well as knowledge" (Ford, 2015: 272–273).

Educating for wisdom, compassion, and ecological stewardship will require a different kind of curriculum than what now exists. We will have to recover old ways—and develop new ones—of teaching young people to think carefully about the world and their lives and about how to find happiness and meaning without destroying the planet and other cultures. (Ford, 2015: 273)

It is important to remember as well that Francis is not the only, nor the first, religious leader to call for change. Two years before the Vatican released *Laudato Si'*, the Ecumenical Patriarch Bartholomew dedicated a day of prayer for the renewal of the earth (September 1, 2013). He sent this message to his flock: Since then, as a result of this initiative, the interest in protecting the natural environment has expanded more broadly and numerous measures are now taken for the sustainability and balance of the earth's ecosystems as well as for all related problems....

On the occasion, then, of this important day and the commencement of the year, we pray with Joshua, the angelic Symeon, the seven children in Ephesus, and the sacred Psalmist David that the Lord will send forth His spirit and renew the face of the earth (cf. Ps. 103.20) to bless the works of His hands and deem us worthy of peacefully completing the time that lies before us. And we invoke upon those undertaking scientific research into the power of nature the illumination, grace and blessing of the Holy Spirit. Amen. (Bartholomew, 2013)

The debate over Francis's encyclical will hopefully continue attracting more support and assessment. It calls attention to important social, economic, political, and religious principles, principles that are not new and that have been with us for a very long time. We therefore cannot allow those who argue that *Laudato Si'* is naïve and wishful thinking to claim victory because we did not try. Unlike Forster and Donoughue, we need to be more hopeful and positive; indeed, their concluding comments in their article for The Global Warming Policy Foundation already beg the question:

Overall, the encyclical strikes us as well-meaning but somewhat naïve. Its gentle idealism longs for a world in which cats no longer chase mice, a world in which species do not kill and eat each other (most do), a world in which species no longer become extinct, despite the firmly established scientific fact that most of the species that have existed have already become extinct through the normal operation of the evolutionary process. (Forster & Donoughue, 2015: 7)

Church leadership, moreover, has evolved Roman Catholic social thought in many ways since Leo XIII penned *Rerum Novarum*. A partial list of such developments would include:

- shifting from policies that favored the wealthy and employers to policies that emphatically state the right of individuals to dignity (as expressed in the right to organize) and to work that provides a living wage;
- actively pursuing the principle of subsidiarity both within the Church and in support of those peoples who are currently unable to organize and pursue their social and economic interests;

- recognizing the interests of Catholics held in common with every other religious denomination and widening the lines of communication and collaboration; and,
- actively arguing for a consistent ethic of life (Bernardin, 2008).

All these issues share a link to human dignity and, by extension, to an integral ecology. We need to ask ourselves what we can contribute to the effort, and how this journal can foster an atmosphere that encourages research and action in pursuit of an integral ecology.

So now what? After reading the articles in this issue, one may ask, "What are we doing? What do we intend to do?" If we use as a reference point the worldwide network of Jesuit colleges and universities, the answer to these questions is, "We are doing much and can do a great deal." In the wake of the release of *Laudato Si'*, many Jesuit schools developed conferences and teach-ins to discuss the implications of the encyclical and map strategies for ensuring that Francis's message was not just received but also actually acted upon. The development of this journal, moreover, represents a commitment by members of the International Association of Jesuit Business Schools to transform our academic focus into one that will contribute much more toward achieving a sustainable world. An article appearing on the Ignatian Solidarity Network (ISN) provides an impressive list of activities sponsored by Jesuit colleges and universities, high schools, and parishes in response to the encyclical's release (ISN Staff, 2016).

Faculty at many of these schools have also developed courses that challenge the Dominant Social Paradigm and cast traditional subjects into the context of *Laudato Si'*. Articles in earlier issues of this journal document such courses in formation or already implemented in the curriculum; they recast traditional business subjects into a framework consistent with the principles of sustainability. Werner and Stoner, for instance, demonstrate how a traditional finance course can be reframed to encourage the types of values, principles, and practices that support initiatives consistent with Francis's message (Werner & Stoner, 2015). Other articles, including those in a special issue of this journal (2013; on social entrepreneurship), talk about how entrepreneurship courses can focus on social issues by using the creative process to develop enterprises that assist the poor and disadvantaged.

Such faculty initiatives at individual schools are not the only avenues, however, for introducing the principles of sustainability and supporting Francis's call for a cultural transformation. The Ignatian Solidarity Network provides a communications channel for spreading and collecting information, publishing an extensive list of activities undertaken at Jesuit institutions after taking stock of accomplishments one year after the publication of *Laudato Si'*. The list cut across all layers of education, detailing events at colleges, universities, high schools, and parishes as well as with aligned groups (ISN Staff, 2016).

As individuals, we can do what every other person can—live a lifestyle that respects and promotes values congruent with a commitment to sustainable practices. Doing so begins with a respect for human dignity, a point several of our authors made in suggesting alternative management models. It also means recognizing the Pontiff's main thesis—that we live in a created world/universe where human beings are only one aspect of that existence. Admitting this principle, however, requires that we rethink the role of humankind. William Weis thus reminds us, in an article written well before the release of *Laudato Si'*, of the influence of faculty and of the implications of not walking the walk (Weis, 2013).

Other endeavors include aiding other groups and institutions in taking practical action. For instance, we can volunteer for organizations when they sponsor activities intended to promote sustainability. For those who attend religious and spiritual services, volunteering at events sponsored by our local parish, church community, synagogue, temple, mosque, etc. can provide support for pastors, ministers, and leaders as well as set examples for our children, their friends, and their classmates. We can also volunteer for political activity that supports policies consistent with sustainable practices and candidates who will support compatible policies.

We also need to find ways to maintain relationships with our graduates to minimize intellectual and social distance. Beyond the occasional interaction at alumni events or on-campus activities featuring interesting or prominent speakers, we tend to lose contact with all but a few of them after they finish their degrees and take their place in the workaday world. By maintaining these relationships, we may be able to encourage them to apply the principles they were exposed to in class and influence their behavior in the work environment. And, perhaps far more importantly, they may be able to teach us a great deal about problems, opportunities, and possibilities in contributing to a more sustainable world. We cannot continue to interact with them only when we raise funds for a building or an endowed chair.

We can thus continue the practices that helped bring us this far especially in our educational institutions, e.g., developing coursework, providing opportunities outside the classroom context, participating in and contributing to extra-curricular activities. But there is still more that can be done, like encouraging our institutions to form consortia that can broaden the support base. Groups of faculty members, for instance, can urge administration to make it easier for students and faculty to develop initiatives and to reward such efforts by including them in the evaluation process.

Faculty members sitting either as voting or *ad hoc* members of boards of trustees can also provide support by encouraging their boards to invest only in firms that promote sustainable practices while avoiding those that pursue the contrary. They can implement internal policies and practices that award contracts to companies that follow sustainable practices as well as set goals for the reduction of the institution's carbon footprint, if they have not already done so.

We can also encourage the membership of the Association of Jesuit Colleges and Universities (through the participating administrators of our institutions) to promote the encyclical as well as sustainable business practices within their organizations as much as they support the sharing and coordination of study abroad programs. The AJCU has spoken out twice in recent months, for instance, on behalf of students impacted by the DACA issue.

We can also encourage the administration and faculty of colleges of business administration to undergo a process of discernment to determine if concrete programmatic changes that promote sustainability can be introduced while maintaining and enhancing career opportunities for students. Stoner has identified some of the worst practices of our current finance and other courses in a document that mimics, somewhat ruefully, the United States Declaration of Independence (Stoner, 2016). We need to spend time reviewing the content of these subjects to see how they can be redesigned to support the development of curricula that take sustainable practices seriously, and to ensure that graduates are prepared to compete in an environment that may, at least initially, take a stance of indifference.

On a global level, we need to find ways to assist schools in countries where there are large concentrations of people at the margins. While this does not imply that no such programs are already in place and doing good work, several authors in this issue indicate discrepancies in wealth distribution that continue to widen. Progress in reducing poverty and conserving resources also appears to be slow. These environments as such seem to be fertile grounds for the development of alternative educational models. Without treating these cultures as laboratories, we may be able to help them experiment with educational programs that are more consistent with sustainable principles and practices. In fact, they may have greater success than our own institutions because they may have less inertia and fewer vested interests.

There is little doubt that our faculties can creatively incorporate ideas and concepts that highlight the connection between our subject fields and the principles Francis promotes in his encyclical. Many faculty members, for instance, are already emphasizing the centrality of respect for human dignity as an integral component in courses they are currently teaching and developing in traditional disciplines. Doing this does not require a major change in values; it "simply" requires that we keep seeking to walk the talk of our beliefs. As members of Jesuit institutions of learning, we are already pursuing many of the foundational values needed to nurture and promote sustainability as envisioned by the Pontiff, values well described in a document initially developed at the Jesuit Institute as a work of the British Province of the Society. It was written well before sustainability attained traction as a hot topic, and demonstrates that Francis's efforts to link his encyclical to transformative changes in culture are consistent with the education philosophy pursued by the Jesuits for centuries. It also shows that Francis's encyclical may be less revolutionary than portrayed and is fully consistent with Church philosophy which treats creation as a gift not just to benefit from but for which we have obligations. Indeed, as several supporters of Francis have indicated, humankind needs to respect the dignity of all creation.

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EL PAPA FRANCISCO, LAUDATO SI', Y LA ECOLOGIA INTEGRAL PERSPECTIVAS SOBRE UN ASUNTO CRITICO

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INTRODUCCIÓN

Los editores de la primera edición de esta revista académica determinaron un criterio importante para publicar artículos: los autores deben responder afirmativamente a la siguiente pregunta "¿Leer este artículo contribuirá a los esfuerzos de otros de crear un mundo más sostenible?" (Stoner, 2013). En cuanto a los cinco artículos de esta edición, yo considero que el lector responderá afirmativamente—aunque comparten varios conceptos y preocupaciones, cada uno provee una perspectiva diferente de los problemas, consecuencias concurrentes, y remedios relacionados con la ausencia de una ecología integral.

Los artículos también concuerdan en otro punto: la observación que muy pocas personas están influenciando el destino del planeta. Al controlar la riqueza y el proceso político, una pequeña elite ha adoptado políticas que ponen en riesgo la sustentabilidad del planeta. Por supuesto, combatir con esta concentración de poder, influencia, y riquezas en las manos de algunos pocos ha estado en el centro de las políticas sociales de la Iglesia desde el siglo 19 (iniciando con el *Rerum Novarum* de León XIII). El Papa Francisco no es el primer papa en abogar por los más marginados—documentos papales han avanzado progresivamente hacia el apoyo a la clase trabajadora, reconociendo el derecho al trabajo, un salario digno, y a organizarse. Es así, que el Santo Padre a continuado el proceso de conectar los ámbitos sociales, económicos, y políticos al ámbito espiritual, un proceso que los artículos aquí publicados han documentado. De hecho, como se argumentará en la conclusión de esta editorial, estos estudios evidencian la necesidad de más trabajo académico y participación en el mundo laboral, si realmente deseamos contribuir constructivamente a la mejoría de la sostenibilidad del mundo.

Otro concepto merece mención aquí: desde finales del siglo 19, documentos papales han argumentado por el incremento del uso del principio de subsidiariedad—la noción que las decisiones deben resolverse en el nivel organizacional más bajo posible. Junto al principio de democracia participativa, su concepto paralelo en el mundo secular, subsidiariedad vela por la dignidad humana. Al evidenciar nuevos modelos administrativos, los artículos en esta colección demuestran cómo y por qué estos principios son importantes y sugieren cómo estos pueden contribuir a una ecología integral.

REACCION A LA ENCÍCLICA

La encíclica de Francisco, *Laudato Si'*, generó un gran interés académico y popular cuando se publicó en junio del 2015. Algunos consideraron que se había demorado mucho; otros criticaron a Francisco porque consideraban que no tenía la formación para hablar del tema, específicamente sobre la sostenibilidad (Fleming, 2016). Entre los segundos, algunos eligieron personalizar la crítica mientras que otros atacaron las bases científicas y teológicas del documento. En un artículo publicado por la Fundación de Políticas del Calentamiento Global (Global Warming Policy Foundation), por ejemplo, Foster y Donoughue indicaron que 90% del cubrimiento de los medios se enfocó en el cambio climático notando que solo el 10% del articulo está enfocado a ese tema. Ellos tienen seis criticas puntuales en contra de Francisco: pobreza, combustibles fósiles, mercados, ciencia y consenso, adaptación, y el principio de precaución. Para ellos,

La encíclica tiene muchos matices determinadas por un mundo arcaico, antes de la revolución industrial, una época supuestamente más simple, limpia y alegre. Hay muy poca evidencia histórica que apoye esas afirmaciones, y para la mayoría de las personas de esa época la vida era corta, dolorosamente corta, y de cierta manera brutal. (Forster & Donoughue, 2015)

Aun así, mientras el documento recibió críticas por pecados de omisión y comisión, la legitimidad de estas evaluaciones debe ser vista en sus contextos particulares. Francisco estaba derrumbando creencias antiguas de que la tierra debería ser subyugada en vez de ser cuidada y cultivada. Para algunos, él es el nuevo abanderado de esta lucha—en el prefacio de un compendio de artículos sobre la ecología integral, John B. Cobb, Jr. dice:

La audiencia principal del papa no era la elite de la iglesia o del mundo. Él se dirigió a las personas del mundo. Y muchos han atendido al llamado de Francisco. Anteriormente, teníamos varios líderes trabajando por lograr un cambio racional, por ende, no había ningún líder verdadero. Ahora la causa de la VIDA tiene a un campeón que no puede ser ignorado. (Cobb & Castuera, 2015: iv–v)

A pesar de la multitud de elogios que recibió el documento como un nuevo manifiesto, Thomas Rausch advierte que "este documento tan anticipado no es principalmente sobre el cambio climático como se proclama, aunque el cambio climático sí es una de las preocupaciones del Santo Padre" (Rausch, 2017: 135). Al contrario, es un documento que hace un llamado a todos a proteger nuestro "hogar compartido" a la imagen y semejanza del Creador. Un acercamiento a ese fin, como muchos autores aquí indican, es la búsqueda de una ecología integral.

Así es como Francisco añade una nueva dimensión al discurso de sostenibilidad, elevando el debate de ser simplemente un problema de derroche y mal uso a uno de respeto por la creación de Dios y todos sus elementos. Él está ampliando el pensamiento de León XIII, quien llamó la atención a la lucha laboral, indicando que los trabajadores, como hijos de Dios, tienen derechos y no deberían ser usados como medios para un fin. Como León, Francisco siente la obligación de hablar a favor de los más necesitados y recalca la importancia del principio de subsidiaridad: las decisiones que afectan la vida de muchos deben ser resueltas dentro de esos círculos (en el nivel organizacional más bajo posible) y no automáticamente por los privilegiados. El ya retirado arzobispo de Canterbury, Rowan Williams, aclara el significado de esas palabras:

El argumento de las secciones iniciales de *Laudato Si'* repetidamente nos redirige a una lección fundamental: Nosotros como seres humanos no somos una fuente de significado o valor; si creemos que lo somos, cambiamos el mundo real por un mundo virtual, un mundo en el cual—haciendo eco a Humpty Dumpty de Lewis Carroll—la única pregunta es quién es el jefe. Una cultura en la cual manejar limites es vergonzoso y es una imperativa mal recibida, es una cultura que ha perdido contacto con la idea misma del mundo, mucho menos de un mundo creado (i.e., uno en el cual una inteligencia creadora se comunica con nosotros y nos guía hacia significados y visiones, los cuales no hubiéramos podido generar nosotros mismos). (Williams, 2015)

Como León XIII, Pío X, Juan XXIII, y pontífices antes de ellos, Francisco está afirmando la obligación de la Iglesia de asegurar el bienestar de toda la creación de Dios. Él está reiterando la creencia de que estamos en un "mundo creado."

Cada uno de los artículos de esta edición provee una perspectiva única sobre la encíclica de Francisco. Cada uno incluye perspectivas que los lectores pueden considerar y examinar. Cada uno reconoce que Francisco agregó una nueva dimensión al papel que juega la Iglesia al enfrentar la insostenibilidad global. Cada uno percibe que parte de la solución es el desarrollo de un nuevo paradigma para compartir la tierra respetando al Creador. Todas observan que Francisco está haciendo más que solo añadir a los fundamentos establecidos por sus antecesores (De León XIII a Benedicto XVI) de cómo tratar a nuestra casa compartida con respeto y maravilla, y que mientras el cambio climático y la insostenibilidad son elementos importantes de la encíclica, solo son síntomas de un problema integral, sistemático, y global que exige una solución en un mundo creado.

LAUDATO SI' Y LA ECOLOGIA INTEGRAL: UNA RECONCEPTUALIZACIÓN DE LA SOSTENIBILIDAD

En "Laudato Si' y la Ecología Integral," Imanaka, Prussia, y Alexis usan el lente del pensamiento social Católico Romano para extender "el enfoque de sostenibilidad para que incluya la justicia social mediante un énfasis en la dignidad humana, el bien común y caritas" (p. 39). Mientras el articulo llama la atención a como algunos negocios tergiversan sus prácticas de sostenibilidad a pesar de generar consecuencias insostenibles, su enfoque principal es demostrar como los principios subyacentes de la enseñanza social Católico-Romana pueden construir puentes entre conceptos importantes en la literatura de sostenibilidad como la ecología humana, la paz, y la conversión ecológica. Así, ellos reconstruyen el marco de sostenibilidad a través de la noción de ecología integral.

Al conectar al Catolicismo Romano con la sostenibilidad, Imanaka y sus coautores toman del trabajo del Centro de Conservación de Saint Kateri Tekakwitha. Ellos indican que el Centro, el cual ha venido desarrollando una perspectiva sistemática Católico-Romana sobre sostenibilidad, adaptó y refinó los siete temas de la responsabilidad ecológica originalmente desarrollada por los Obispos Católicos de EE.UU. Como un listado útil para intentar comprender los fundamentos de la rúbrica Católica-Romana sobre la sostenibilidad, estos principios merecen ser repetidos aquí:

- 1. Una visión [centrada en Dios y] sacramental del universo [la cual adhiere la responsabilidad del destino de la tierra al ser humano];
- 2. un respeto consistente por la vida humana, el cual se extiende a un respeto por toda la creación;
- 3. una visión global afirmando la significancia ética de la interdependencia global y bien común global;
- 4. una ética de solidaridad promoviendo la cooperación y una estructura justa de compartir en la comunidad global;
- 5. un entendimiento del propósito universal de las cosas creadas, el cual requiere uso equitativo de los recursos de la Tierra;
- 6. [opciones reales para los pobres], las cuales [generen] pasión en la búsqueda por un mundo equitativo y sostenible; y
- 7. la concepción de un desarrollo autentico[,] el cual ofrece una ruta a seguir para el progreso que respete la dignidad humana y los límites del crecimiento. (p. 45)

Para los miembros del Centro, estos temas son un buen punto de partida para los principios que pueden guiar una perspectiva Católica-Romana sobre la sostenibilidad como se plantea en *Laudato Si'*.

Los autores también aportan un modelo de ecología integral que demuestra "como el concepto de ecología integral está relacionado con el paradigma de desarrollo sostenible secular y las enseñanzas antiguas sobre el medio ambiente y la justicia en la Doctrina Social de la Iglesia (DSI)" (p. 54). Ellos argumentan que la ecología integral es un antídoto para las prácticas empresariales insostenibles.

En un artículo preparado para la 10ma Conferencia Internacional Whitehead y publicado en *For Our Common Home: Process-relational Responses to Laudato Si' (Por Nuestro Hogar Común: Respuestas Procesorelacionales a Laudato Si')*, Clugson y Gore indican que *Laudato Si'* nos reta a implementar tres cambios principales:

De un antropocentrismo agudo a una ecología integral, centrada en el bien común y la interconectividad y la dignidad de todos los seres vivos.

Hacia un orden social justo y equitativo, enfatizando unas metas para el desarrollo que reemplace el crecimiento económico y la ganancia a corto plazo (PIB) con medidas holísticas del bienestar personal y planetario.

Hacia una colaboración global real—un movimiento social que no sea solo de conversión sino de convergencia basada en una ética global compartida. (Clugson & Gore, 2015: 202)

Esta perspectiva laica provee conceptos para desarrollar una definición de ecología integral y es consistente con los principios refinados por Imanaka et al., cuyo punto de vista está definitivamente influenciado por el *Spiritual Exercises (Ejercicios Espirituales*) de Ignacio y ofrece una perspectiva distintivamente Católica-Romana (y quizás Jesuita) sobre la sostenibilidad.

LA DESIGUALDAD, LA DIGNIDAD, Y EL DESAFÍO DE LA SOSTENIBILIDAD

Sandra Waddock explora alternativas a los modelos económicos corrientes mediante el concepto de desigualdad. Como muchos de los otros colaboradores, ella identifica cómo la falta de practica de negocios sostenibles genera grandes sismos entre los que tienen y los que no, y demuestra como el cambio climático tiene un efecto diverso sobre las personas de diferentes clases sociales y económicas. Citando un documento del Grupo Intergubernamental de Expertos sobre el Cambio Climático del 2014, ella construye un vínculo entre sostenibilidad y desigualdad: "El riesgo está distribuido desigualmente y es generalmente más alto para las personas y comunidades más necesitadas en países de todos los niveles de desarrollo" (p. 66, citando IPCC, 2014: 13). Ella también cita el pensar de Francisco: "Estrategias para una solución requieren un enfoque integral para combatir la pobreza, restaurando la dignidad para los excluidos, y al mismo tiempo proteger la naturaleza" (p. 66, citan Francis, 2015: no. 139).

Waddock considera que la desigualdad es un problema sistemático. Ella observa, por ejemplo, que en demasiadas ocasiones la pobreza tiene como consecuencia la violación de la dignidad de los pobres, y que la disparidad de la riqueza a nivel mundial, están causando un reducimiento de la clase media y una crisis laboral. Waddock por ende introduce los esfuerzos por parte de Naciones Unidas que establecen metas que están diseñadas para reducir la desigualdad, la injusticia, y frenar el cambio climático.

El repaso de Waddock del impacto de las prácticas empresariales actuales también la llevan a considerar teorías alternativas para hacer negocios. La meta principal de esas ideas es el de redefinir el significado del éxito, para el cual la maximización de riquezas y ganancias han sido la medida por mucho tiempo. Los nuevos modelos empresariales y económicos que propone Waddock apuntan a cambiar nuestra elección de medidas para favorecer estrategias que sean más compatibles con prácticas sostenibles. Un resultado de estos modelos alternativos, por ejemplo, sería una mayor participación de las bases en la toma de decisiones, las cuales contribuirían a desarrollar un cálculo de decisiones más igualitario. También fomentaría el reconocimiento de una naturaleza compartida en temas económicos, políticos, y sociales que sean consistentes con el llamado de Francisco hacia el respeto y la dignidad humana.

LAUDATO SI' Y LA PERSPECTIVA DEL PAPA SOBRE LA DEUDA ECOLÓGICA

Este estudio se enfoca en un tema más específico, y quizás más contencioso comparado con la mayoría de los otros colaboradores. Chipalkatti, Rishi, y Lobo usan el concepto de la deuda ecológica para introducir su dictamen sobre la crítica de *Laudato Si'* a países del hemisferio norte, una idea que nace del retrato de la economía entre el Norte y Sur global presentada en el párrafo 51 de la encíclica. Los autores observan que

en la vision [de Francisco], el exceso de consumo del Norte global ha llevado a un uso desproporcionado de los recursos naturales extraídos del Sur global, resultando en un daño ambiental local para el Sur. Una deuda surge cuando los recursos crudos se exportan de naciones pobres (Sur) hacia naciones ricas (Norte) para satisfacer el apetito de los ricos. (p. 86)

Ellos pasan a evaluar las declaraciones del Papa, dando una perspectiva histórica sobre el concepto de la deuda histórica antes de pasar a evaluar la crítica del uso de las multinacionales de la hipótesis de refugios de contaminación y datos empíricos.

El trato histórico de Chipalkatti et al. a la deuda ecológica incluye una breve historia de los conceptos usados por intelectuales y líderes políticos Sur Americanos. Ellos también utilizan una definición desarrollada por la Universidad de Ghent que nos dirige hacia tres patrones diferentes de daño ecológico:

- 1. el daño ecológico causado a través del tiempo por el país A en otros países o en el área bajo la jurisdicción de otro país mediante sus patrones de producción y consumo, y/o
- el daño ecológico causado a través del tiempo por el país A a ecosistemas más allá de su jurisdicción nacional mediante sus patrones de consumo y producción, y/o

3. la explotación o uso de ecosistemas y bienes y servicios del ecosistema a través del tiempo por el país A a costa de los derechos equitativos de esos ecosistemas y bienes y servicios de ecosistemas de otros países o individuos. (Goeminne & Paredis, 2010: 697)

Los autores entonces argumentan que la encíclica de Francisco ha energizado esta discusión.

Desde su análisis histórico, cuatro métodos para calcular la deuda ecológica son considerados. Una medida es "la cantidad de daño ecológico causado a través del tiempo por un país, mediante sus patrones de consumo y producción, en ecosistemas más allá de su jurisdicción natural" (p. 91); efectivamente, un resumen de sus hallazgos determina que "nuestros resultados demuestran que esta afirmación es empíricamente válida para nuestra muestra de países exportadores de comodidades" (p. 98). Los autores hacen varias recomendaciones para mitigar los efectos negativos de los procesos y políticas que fomentan la deuda ecológica.

LAUDATO SI'

El artículo de Fr. Rausch es un análisis más tradicional de la encíclica. Él analiza el documento capitulo por capitulo mientras responde la pregunta "¿Qué le está pasando a nuestro hogar común?". El observa en su primera sección las consecuencias del abuso sufrido por la tierra y su ecosistema. El reitera que a lo que llama atención Francisco no es nada nuevo, y apunta que Pablo VI, Juan Pablo II y Benedicto XVI también hicieron llamados para reducir las emisiones del efecto invernadero y para ayudar a los más afectados por los efectos dañinos del cambio climático. Es de particular importancia notar que en el primer capítulo de *Laudato Si'* Francisco no indica tener todas las respuestas; al contrario, pide una colaboración y deliberación para tratar el cambio climático. Él deja abiertas las puertas en vez de sugerir un dogma.

Como los otros autores, Rausch hace un punto basado en la ampliación del concepto de planeta hecho por el Pontífice: "Francisco argumenta que la Biblia no da cabida a un antropocentrismo tirano a cuesta de, o desentendido de, las otras criaturas de Dios..." (p. 138). Él también hace eco a los sentimientos de otros cuando resalta que el Cardenal Turkson indicó—que la palabra "mayordomía" se usa mucho menos que la palabra "cuidado." Ese énfasis demuestra cómo el documento de Francisco y la Iglesia se siguen alejando de una visión antropocéntrica del mundo. Comentando sobre la ecología integral según la encíclica, Fr. Rausch reitera "que como seres humanos pertenecemos a una familia humana singular, dependiendo mutuamente y en la tierra que es nuestro hogar común" (p. 140). Una ecología integral debe ser caracterizada por nuevas definiciones a términos como "uso sostenible," por ejemplo, el cual "significa considerar la habilidad regenerativa de cada ecosistema" (p. 141). Aquí Rausch observa, al igual que muchos, que Francisco está retándonos a todos a tener una conversación profunda, a un cambio en estilos de vida, en el cual un concepto de ecología integral vuelva a proveer un principio organizacional. Como el autor comenta, citando la encíclica, "un verdadero enfoque ecológico siempre se convierte en un enfoque social; debe integrar preguntas sobre la justicia en debates sobre el medio ambiente, para que así escuche *el clamor de la tierra y el clamor de los pobres*" (no. 49), especialmente dado que los pobres son los más afectados por los cambios al medio ambiente.

En párrafos siguientes, Fr. Rausch habla sobre los miedos expresados por los críticos al discutir el tratamiento que le da Francisco a la tecnología y a términos como el "libre mercado" y "economías impulsadas por la ganancia." Él nos recuerda que Francisco "no está pidiendo el fin del capitalismo, pero si pide una espiritualidad más sensible para nuestro planeta doliente" (p. 142). De nuevo, se nos recuerda que *Spiritual Exercises (Ejercicios Espirituales*) es un elemento integral en el proceso que nos acerca a una ecología integral.

LA ENCÍCLICA PAPAL *LAUDATO SI'*: UN ENFOQUE DE SOSTENIBILIDAD ATENTO A LOS POBRES

En la primera frase de su artículo, Kennedy y Santos citan reacciones a *Laudato Si'* del *Financial Times* de Londres y *The Guardian*. Ellos notan que estos grandes medios de comunicación se refieren a *Laudato Si'* "como uno de los eventos más significativos del movimiento ambientalista moderno" y algo "a lo cual el mundo debería prestar atención" (p. 110). Ciertamente, el autor del prefacio de una colección de artículos sobre la ecología integral resonó los elogios cuando dijo que "nosotros [los miembros de la conferencia] decidimos unir nuestro pequeño movimiento al gran movimiento que esperamos que lidere el Papa Francisco" (Cobb, 2015: v). Semejantes comentarios seguramente sirven como testimonio del impacto que ha tenido el mensaje de Francisco, y significa que no todos los empresarios lo consideran amenazante, que ignora los hechos, o es objetable. De hecho, el artículo de Kennedy y Santos intenta demostrar como modelos de negocios alternativos pueden acercar al mundo hacia el concepto de una sociedad justa del Santo Padre. Los autores primero muestran como el Paradigma Social Dominante (PSD) falla en su apoyo a las metas globales de sostenibilidad, y lo contrastan con el Nuevo Paradigma Ecológico (NPE) el cual pide una visión más eco-céntrica y holística del mundo. Ellos evalúan y observan el programa desarrollado por organizaciones como la OECD, el Pacto Global de la ONU, y la Mesa Redonda de Caux como pequeños avances en la dirección correcta, como esfuerzos para moderar los excesos empresariales, pero los consideran demasiado antropocéntricos. Ellos citan la conclusión de Kilbourne al decir que "el cambio real en el comportamiento ambiental no ha ocurrido aún con una mayor preocupación por el medio ambiente" (p. 111, citando Kilbourne, 2010).

Kennedy y Santos concluyen que las bases de las suposiciones del PSD y NPE son considerablemente diferentes. Para el PSD, ellos nombran cuatro suposiciones que han identificado basado en Catton & Dunlap (1980):

- 1. las personas humanas son independientes e inherentemente diferentes a la naturaleza, y por ende dominan sobre ella;
- 2. que ellos están en control de sus propios futuros;
- 3. que el mundo tiene potencial ilimitado para crear oportunidades para las personas humanas; y
- 4. que el progreso humano puede ser mantenido por el ingenio humano, frecuentemente por medio de la tecnología. (p. 114)

Al rechazar la noción que el PSD puede conservar un futuro más sostenible, ellos enfocan el resto del artículo en comparar las suposiciones del NPE con *Laudato Si'* y a discutir como los principios derivados del NPE y *Laudato Si'* pueden resolver de mejor manera las fallas de la situación ambiental actual. Estas comparaciones cuidadosas construyen enlaces con el pensamiento social Católico-Romano y demuestran que mientras la encíclica de Francisco critica al libre comercio, en sí mismo él no lo rechaza. Los autores concluyen que *Laudato Si'* pone a los pobres y marginados en el centro del debate ecológico.

ESTA EDICIÓN DEL JOURNAL EN CONTEXTO

Al reflexionar sobre los artículos de esta edición del *Journal*, es apropiada tener en cuenta que Francisco no utilizó su encíclica como un instrumento dogmático. Él estaba compartiendo su preocupación sincera por el futuro del planeta, inclusivo de toda la Creación. Él habló como un líder espiritual que no solo ha estudiado sino también escuchado a expertos y representantes de las personas marginas por muchos años. Él fomenta el dialogo en todo el documento, no la confrontación, y al parecer él considera que su papel es ser un mentor compasivo y cauteloso. El Padre Santo habla de aspiraciones.

Un principio en el cual ambos críticos y partidarios se han enfocado es el de subsidiaridad. Los críticos de los esfuerzos del Pontífice que provienen de la derecha religiosa, por ejemplo, ven al trabajo de Francisco como sistemáticamente inconsistente con las enseñanzas de los papas desde León XIII. Ellos argumentan que el concepto Católico-Romano de subsidiaridad resalta la idea que los gobiernos (y los centrales en específico) no deberían intentar redistribuir las riquezas, proveer atención médica, o interferir con el derecho a la propiedad (DePrisco, 2017). Protagonistas como David Bosnich, quien escribe por medio del Instituto Acton, por ejemplo, argumenta que los Obispos Católicos de Estados Unidos están distorsionando los argumentos fundamentales de la subsidiaridad al promover atención médica patrocinada por los estados. Él observa que

Este es el por qué el Papa Juan Pablo II se tomó a la tarea de hablar sobre el "estado proveedor de asistencia social" en su encíclica de 1991 *Centesimus Annus.* El Pontífice escribió que el Estado de Bienestar contradecía el principio de subsidiaridad al intervenir directamente y privar a la sociedad de su responsabilidad. Esto "conlleva a la perdida de las energías humanas y un incremento desordenado de las agencias públicas que son dominadas más por una mentalidad burocrática que por una preocupación por ayudar a los clientes y el cual es acompañado por un enorme incremento en gastos." (Bosnich, 2010)

Tales opiniones exponen las divisiones y las perspectivas tan diferentes adoptadas por los Católicos Romanos, sin hablar de los no católicos. Ellos demuestran qué tan divididas están las personas en cuanto la sostenibilidad y otros temas relaciones, e.g., salud universal, limitar el acceso a zonas costeras para explotación petrolera, etc. En efecto, la idea de iniciativas patrocinadas o apoyadas por el gobierno en cuanto a sostenibilidad pueden equivaler a un comportamiento herético para algunos. DePrisco, por ejemplo, interpreta como violaciones directas a las enseñanzas papales las mismas encíclicas papales que indican su apoyo a la ayuda a los marginados patrocinada por el Estado o regulaciones que puedan amenazar aspectos de la posesión o uso de la propiedad privada. Él cita a León XIII para reforzar su argumento en contra de las amenazas a la propiedad privada que pueden nivelar el campo de juego:

Sin embargo, nunca dejar que esto se les escape de la memoria: que mientras es lo correcto y deseable afirmar los derechos de la mayoría, esto no debe ser hecho violando derechos; y que estos son derechos muy importantes; no

tocar lo que le pertenece a otro; permitir que cada quien sea libre manejando sus asuntos; no impedirle a nadie determinar disponer de sus servicios donde y cuando le plazca. (Papa León XIII, como fue citado en DePrisco, 2017)

DePrisco interpreta las palabras de León XIII como si existieran en el mismo contexto histórico de hoy, pero el Pontífice en ese entonces estaba protegiendo los derechos de propiedad en contra de un desafío diferente al que enfrenta Francisco—él estaba preocupado, en parte, con la absorción gubernamental de la propiedad industrial. En realidad, Francisco mismo, como León XIII antes que él, también está preocupado por la dignidad humana en el contexto de la Creación. Ambos necesitaban atender a las consecuencias de incrementar las desigualdades de ingresos y riquezas. Aun así, León no tenía que afrontar en 1891 las fuerzas sociales, políticas, y culturales que hoy enfrenta Francisco.

Como miembros de un grupo selecto de educadores, podemos apoyar al Pontífice al asegurar que nuestras instituciones son incubadoras de las mentes de las generaciones que tendrán que vivir con, y superar, las consecuencias de la continuación de prácticas insostenibles. Esta no será una tarea fácil: como indican los artículos en esta revista, una reforma requerirá grandes cambios culturales alrededor del mundo, pero nuestros sistemas sociales, económicos, y políticos no están diseñados para promover transformaciones a largo plazo. Al conectar estos argumentos a principios religiosos, el Pontífice reconoce que estos temas son complejos y requieren fundamentación filosófica y teológica para justificar los tipos de análisis y acciones necesarias. Es afortunado, que los autores de estos artículos han contribuido en gran manera a esa iniciativa. Ellos han tomado los primeros pasos hacia una solución en lo que aparenta ser un camino largo lleno de problemas por resolver. Aun así, ellos-y todos nosotros—necesitaremos avuda. ¿Qué pueden hacer las instituciones jesuitas para contribuir?

Muchos de nosotros consideramos que nuestras iniciativas educativas son herramientas importantes para generar una mentalidad que pueda ver soluciones menos evidentes. Uno se pregunta hasta qué punto esta suposición es cierta. En el artículo titulado "Sobre la Reforma Educativa," Marcus Ford habla sobre las reformas culturales requeridas para enfrentar los problemas de insostenibilidad. Él dice que "nosotros debemos reemplazar nuestra cultura consumista con una cultura que 'fomenta un estilo de vida profético y contemplativo, capaz de lograr un gozo profundo libre de la obsesión con el consumismo'" (Ford, 2015: 270–271).

Ford también habla sobre lo inadecuado que es nuestro modelo educacional actual. Primero, él observa que "los humanos son parte de

un ecosistema que tiene un significado y valor muy diferente al valor que representa para la economía humana" (Ford, 2015: 271). El pasa a notar que "cambiar nuestra cultura actual de progreso económico e individualismo a una cultura ecológica genera lo que el Papa Francisco cataloga como un reto educacional (209)" (Ford, 2015: 271). Ford cita a Francisco:

La especialización que pertenece a la tecnología hace difícil que se vea el panorama completo. La fragmentación del conocimiento resulta ser útil para aplicaciones concretas, pero aun así genera que se desprecie lo general, por las relaciones entre las cosas, por horizontes más amplios, los cuales se vuelven irrelevantes. (Francis, 2015: no. 110)

Ford también extiende su argumento al observar que nuestras universidades públicas y privadas no están equipadas para proveer una "educación holística, trans-técnica, y ética" (Ford, 2015: 217). Además, "si van a proveer lo que se requiere, tendrán que tomar una nueva forma, aceptar la misión, y adoptar una nueva visión mundial. En su estado actual, la educación superior es una parte significativa del problema que necesita ser resuelto" (Ford, 2015: 271–272). Él luego continua su observación al decir que necesitamos "colegios y universidades que valoren y fomenten la sabiduría a la par del conocimiento" (Ford, 2015: 272–273).

Educar sobre la sabiduría, compasión, y mayordomía ecológica requiere un tipo de currículo diferente al que existe ahora. Tendremos que recuperar practicas antiguas—y desarrollar nuevas—de cómo enseñarles a los jóvenes a pensar con cuidado sobre el mundo, sus vidas, y cómo encontrar la felicidad y sentido sin destruir el planeta y otras culturas. (Ford, 2015: 273)

Es importante también recordar que Francisco no es el único, ni el primer, líder religioso en hacer un llamado por el cambio. Dos años antes de que el Vaticano publicara *Laudato Si'*, el Patriarca Ecuménico Bartolomé dedico un día de oración por la renovación de la tierra (septiembre 1, 2013). El envío este mensaje a su redil:

Desde entonces, como resultado de esta iniciativa, el interés por proteger el medio ambiente se ha expandido ampliamente y numerosas medidas se están tomando por las sostenibilidad y balance de los ecosistemas de la tierra al igual que todos los problemas relacionados....

Entonces, en ocasión de este día tan importante y del comienzo del año, nosotros oramos con Josue, el angelical Simeon, los siete hijos de Éfeso, y el sagrado Salmista David para que el Señor nos envíe su espíritu y renueve la faz de la tierra (cf. Ps. 103.20) para bendecir Su obra y nos juzgue dignos de cumplir en paz el tiempo que nos queda por delante. E invocamos iluminación, gracia y bendiciones del espíritu santo sobre aquellos que emprenden la investigación científica sobre el poder de la naturaleza. Amen. (Bartolomé, 2013)

Ojalá el debate sobre la encíclica de Francisco continúe atrayendo más apoyo y examinación. Llama la atención hacia principios sociales, económicos, políticos y religiosos importantes, principios que no son nuevos y que han estado con nosotros por mucho tiempo. Por ende, no podemos permitir que aquellos que argumentan que *Laudato Si'* es inocente e ilusa salgan victoriosos porque no hicimos nuestra parte. Contrario a Forster y Donoughue, necesitamos ser más optimistas y positivos; por cierto, sus comentarios finales en su artículo para la Fundación de Políticas del Calentamiento Global (Global Warming Policy Foundation) ya generan la siguiente pregunta:

En su totalidad, la encíclica nos resulta bien intencionada pero un poco inocente. Su tierno idealismo sueña con un mundo en el cual los gatos no persigan a los ratones, un mundo en el cual las especias no se matan y comen entre si (la mayoría lo hacen), un mundo en el cual las especies no se extingan, a pesar del hecho ya científicamente comprobado que la mayoría de las especies que han existido ya se han extinguido por medio de la operación natural del proceso evolutivo. (Forster & Donoughue, 2015: 7)

Los líderes de la Iglesia, además, han evolucionado el pensamiento social Católico Romano en muchas formas desde que León XIII escribió *Rerum Novarum*. Un listado parcial de tales desarrollos incluiría:

- cambiar de políticas que favorecían a los ricos y empleadores hacia políticas que declaran enfáticamente el derecho de los individuos a la dignidad (expresado en su derecho a organizarse) y a trabajo que les genere un salario para subsistir;
- Buscar alcanzar activamente el principio de subsidiaridad en el interior de la iglesia y también al apoyar a las personas que son incapaces de organizarse y velar por sus intereses sociales y económicos;
- Reconociendo los intereses compartidos de los católicos con todas las otras denominaciones religiosas y ampliando las líneas de comunicación y colaboración; y,

• a argumentar activamente una ética de vida consistente (Bernardin, 2008).

Todos estos problemas comparten un vínculo con la dignidad humana, y por extensión, a una ecología integral. Necesitamos preguntarnos qué podemos contribuir a estos esfuerzos, y cómo esta revista puede generar un ambiente que fomente la investigación y la acción en la búsqueda de una ecología integral.

¿Ahora qué? Después de leer los artículos de esta edición, uno se puede preguntar, "¿Qué estamos haciendo? ¿Qué pretendemos hacer?" Si tomamos como referente a la red mundial de colegios y universidades jesuitas, la respuesta a estas preguntas es, "estamos haciendo muchas cosas, y podemos hacer muchas más." Recién publicada Laudato Si', muchos colegios jesuitas desarrollaron conferencias y foros para discutir las implicaciones de la encíclica y plantear estrategias para asegurar que el mensaje de Francisco no solo fuera recibido, sino que generara acción. El desarrollo de esta revista, además, representa un compromiso de los miembros de la Asociación Internacional de Escuelas de Negocios Jesuitas (International Association of Jesuit Business Schools) de transformar nuestro enfoque académico en uno que contribuirá mucho más para lograr un mundo sostenible. Un artículo que aparece en la Red de Solidaridad Ignaciana (Ignatian Solidarity Network) provee una lista impresionante de las actividades patrocinadas por los colegios, universidades, bachilleratos, y parroquias jesuitas como respuesta a la publicación de la encíclica. (ISN Staff, 2016).

Las facultades de muchos de estos colegios también han desarrollado cursos que cuestionan el Paradigma Social Dominante y han puesto a las asignaturas tradicionales en el contexto de *Laudato Si'*. Los artículos de las ediciones anteriores de esta revista documentan aquellos cursos en formación y los ya implementados en el currículo; ellos restructuran asignaturas de negocios tradicionales dentro de un marco consistente con los principios de sostenibilidad. Werner y Stoner, por ejemplo, demuestran como un curso de finanzas tradicional puede ser replanteado para fomentar los tipos de valores, principios y prácticas que apoyan iniciativas consistentes con el mensaje de Francisco (Werner & Stoner, 2015). Otros artículos, incluyendo aquellos de la edición especial de esta revista (2013, sobre el emprendimiento social), hablan sobre cómo los cursos de emprendimiento pueden enfocarse en problemas sociales al usar procesos creativos para desarrollar empresas que atiendan a los pobres y a los marginados.

Aun así, las iniciativas de las facultades en escuelas individuales no son el único medio para introducir principios de sostenibilidad y para apoyar el llamado de Francisco por una trasformación cultural. La Red de Solidaridad Ignaciana provee canales de comunicación para esparcir y recolectar información, publicando una lista extensiva de las actividades emprendidas en las instituciones jesuitas después de tomar muestras de los logros un año después de la publicación de *Laudato Si'*. La lista atraviesa todos los niveles educativos, detallando los eventos en los colegios, universidades, bachilleratos y parroquias, al igual que en los grupos aliados (ISN Staff, 2016).

Como individuos, podemos hacer lo que todas las personas pueden vivir una vida que respete y promueva valores congruentes con un compromiso a las practicas sostenibles. Hacer esto, parte de un respeto por la dignidad humana, un punto que varios de los autores hicieron al sugerir modelos administrativos alternativos. También significa reconocer la tesis principal del Pontífice—que vivimos en un mundo/ universo creado donde los seres humanos solo son un componente de esa existencia. Aceptar este principio requiere que reformulemos el rol de la humanidad. William Weis nos recuerda, en un artículo escrito antes de la publicación de *Laudato Si'*, de las influencias de la facultad y de las implicaciones de ser coherentes con sus discursos (Weis, 2013).

Otras iniciativas incluyen ayudar a otros grupos e instituciones a tomar acciones prácticas. Por ejemplo, podemos ser voluntarios para organizaciones cuando patrocinan actividades destinadas a promover la sostenibilidad. Para aquellos que asisten a servicios religiosos y espirituales, ser voluntario en eventos patrocinados por tu parroquia local, comunidad eclesiástica, sinagoga, templo, mezquita, etc. puede servir de apoyo a los pastores, ministros, y líderes al igual que servir como ejemplo para nuestros hijos, sus amigos y compañeros de clase. También podemos ser voluntarios para actividades políticas que apoyen políticas consistentes con las practicas sostenibles y candidatos que apoyan políticas compatibles.

También necesitamos encontrar maneras de mantener relaciones con nuestros graduados para minimizar la distancia social e intelectual. Mas allá de la interacción ocasional en eventos de alumnos o actividades en el campus con conferencistas de renombre, solemos perder contacto con la gran mayoría de ellos después que terminan sus carreras y toman su lugar en el mundo laboral. Al mantener estas relaciones, podremos animarlos a aplicar los principios a los cuales fueron expuestos en clase e influenciar su comportamiento en el ámbito laboral. Y, quizás aún más importante, ellos podrán enseñarnos sobre los problemas, oportunidades, y posibilidades de contribuir a un mundo más sostenible. No podemos continuar interactuando con ellos solo cuando necesitamos recolectar fondos para un edificio o una silla dotada. Por ende, podemos continuar las practicas que nos ha ayudado a llegar tan lejos, especialmente en nuestras instituciones educativas, e.g., desarrollar cursos, proveer oportunidades por fuera del contexto del salón, participar y contribuir a las actividades extracurriculares. Pero aún hay muchos más que se puede hacer, como motivar a nuestras instituciones a formar consorcios que puedan ampliar las bases de apoyo. Grupos de miembros de la facultad, por ejemplo, pueden recomendarle a la administración que facilite que los estudiantes y facultad puedan desarrollar iniciativas y premiar esos esfuerzos al incluirlos en el proceso evaluativo.

Los miembros de la facultad que son miembros votantes o *ad hoc* en juntas directivas, también pueden apoyar al incitar a sus juntas a invertir solo en empresas que promuevan practicas sostenibles, evitando a las que practican lo contrario. Ellos pueden implementar políticas y prácticas internas que otorgan contratos a compañías que siguen practicas sostenibles y que también se pongan metas para la reducción de su huella de carbono, si es que ya no lo han hecho.

Igualmente, podemos incitar a la membrecía de la Asociación de Colegios y Universidades Jesuitas (por medio de los administradores partícipes de nuestras instituciones) a que promuevan la encíclica al igual que las prácticas empresariales sostenibles dentro de sus organizaciones con las mismas energías que apoyan la coordinación e intercambio de programas de estudio en el extranjero. La AJCU (por sus siglas en inglés) se ha proclamado dos veces en los últimos meses en defensa de los estudiantes afectados por el tema de DACA.

De la misma manera, podemos influenciar a las administraciones y facultades de los colegios de administración de negocios para que se sometan un proceso de discernimiento para determinar si cambios programáticos concretos que promueven la sostenibilidad pueden ser introducidos, manteniendo y mejorando las oportunidades laborales de los estudiantes. Stoner ha identificado algunas de las peores prácticas de nuestras clases de finanzas y otros cursos en un documento que imita, melancólicamente, la Declaración de Independencia de Estados Unidos (Stoner, 2016). Necesitamos invertir más tiempo en revisar el contenido de estas materias para demostrar que pueden ser rediseñadas para apoyar el desarrollo de currículos que tomen las practicas sostenibles seriamente, y que asegure que los graduandos estén preparados para competir en un ambiente que pueda, al menos al principio, tomar una posición indiferente.

En un nivel global, necesitamos encontrar maneras de ayudar a escuelas en países donde hay grandes niveles de concentración de

personas marginadas. Mientras esto no implica que no existan este tipo de programas y que sean efectivos, varios autores en esta edición indican que las discrepancias en la distribución de las riquezas siguen aumentando. Los avances en la reducción de pobreza y de conservación de recursos parecen ir en cámara lenta. Estos entornos como tal, parecen ser tierra fértil para desarrollar modelos educativos alternativos. Sin tratar a estas culturas como laboratorios, podremos ser capaces de ayudarles a experimentar con programas educacionales que son más consistentes con los principios y practicas sostenibles. De hecho, ellos pueden llegar a tener un mayor éxito que nuestras propias instituciones porque pueden llegar a tener menos apatía y menos intereses personales.

Tenemos mucha fe que nuestras facultades pueden incorporar creativamente conceptos que resalten la conexión entre nuestro campo de estudio y los principios que promueve Francisco en su encíclica. Muchos miembros de la facultad, por ejemplo, ya están enfatizando la centralidad del respeto por la dignidad humana como un componente integral en los cursos que dictan y desarrollan en disciplinas tradicionales. Hacer esto no requiere un gran cambio en los valores; "simplemente" requiere que nosotros continuemos siendo congruentes con nuestro discurso sobre nuestras creencias. Como miembros de una institución de aprendizaje jesuita, ya estamos siguiendo muchos de los valores fundamentales necesarios para nutrir y promover la sostenibilidad según la visión del Pontífice, valores bien definidos en un documento inicialmente desarrollado en el Instituto Jesuita como un trabajo de la Provincia Británica de la Sociedad. Fue escrito mucho antes de que la sostenibilidad cogiera tracción como el tema de moda y demuestra que los esfuerzos de Francisco de enlazar su encíclica a cambios transformativos en la cultura son consistentes con la educación filosófica establecida por los jesuitas hace siglos. También demuestra que la encíclica de Francisco puede que sea menos revolucionaria de lo que se le considera, y es completamente consistente con la filosofía de la Iglesia, la cual trata a la creación como un regalo y no solo para beneficiarnos sino con la cual tenemos obligaciones. Por cierto, como varios defensores de Francisco han indicado, la humanidad debe respetar la dignidad de toda la creación.

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LAUDATO SI' AND INTEGRAL ECOLOGY A RECONCEPTUALIZATION OF SUSTAINABILITY

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Abstract. This study analyzes sustainability concepts through the lens of Roman Catholic Social Teaching (CST) with a special emphasis on *Laudato Si'*. CST expands the focus of sustainability to include social justice through its emphasis on human dignity, the common good, and *caritas*. In CST, justice is understood as structural while environmental obligations are connected to integral human development and peace. In *Laudato Si'*, Pope Francis calls on us to counter prevailing unjust systems with a structural reordering of multiple ecologies: environmental, economic, social, cultural, and daily life. Based on this reordering, he developed the notion of *integral*

ecology, and we show how it encompasses a set of existing sustainability ideas in CST and, more importantly, how it changes the focus and scope of sustainability. Unfortunately, and despite supposed good intentions, some institutions misrepresent and use the term "sustainability" to justify systems that result in "un-sustainable" consequences. We thus show how *Laudato Si*" offers an antidote to such unsustainable practices by reconceptualizing the sustainability construct through the notion of integral ecology.

Keywords: Laudato Si'; Roman Catholic Social Teaching; integral ecology; human ecology; sustainable development; social justice; business unsustainability

INTRODUCTION

Laudato Si': On Care for Our Common Home is the second encyclical by Pope Francis, the 266th pope of the Roman Catholic Church. The major focus of this document is a consideration of global environmental issues together with a wide range of associated recommendations. Such a unique emphasis on the environment indirectly engenders a need for reconceptualizing the (relatively) recently established notion of sustainability. The purpose of this article, therefore, is to show how the encyclical contributes to this broader definition of sustainability. We begin with a brief introduction to Laudato Si', indicating how the encyclical provides groundbreaking recommendations related to sustainability practices. Next, we provide a background of Roman Catholic Social Teaching (CST) and show how it relates in general to sustainability, with a particular focus on recent papal thought (St. John Paul II and Benedict XVI). We then provide a specific description of three sustainability-related concepts within CST: human ecology, peace, and ecological conversion. This background is then followed by a detailed explication of how Laudato Si' contributes to a broader consideration of sustainability and how the typology introduced within *integral ecology* dovetails with sustainability practice. Finally, we consider how some business practices contribute to un-sustainability and show how the concept of sustainability should appropriately be reconceptualized based on tenets laid out in Laudato Si'.

LAUDATO SI' BREAKS NEW GROUND

The Pontifical Academies of Sciences and Social Sciences held a joint workshop entitled "Sustainable Humanity, Sustainable Nature: Our Responsibility" at the Vatican in May of 2014 (http://www.casinapioiv. va/content/accademia/en/events/2014/sustainable.html). The conference brought together leading natural and social scientists from around the world, including four Nobel laureates. This workshop and others served to 1) delineate the boundaries between science and religion while they simultaneously and mutually informed one another, and 2) develop the knowledge base at the Vatican as a groundbreaking encyclical on the environment was being prepared.

Although Popes St. John Paul II and Benedict XVI had taken up environmental issues in encyclicals and assorted documents, environmental themes had never before been treated so extensively in any official Church document. Released in June 2015, *Laudato Si'* is the first papal social encyclical dedicated primarily to environmental issues. It would come to incorporate state of the art contemporary research bearing on environmental crises and their attendant consequences, utilizing a depth of scientific information that marked a departure from previous encyclicals in both content and style. As evidence of this, the document has been widely praised by the scientific community (Brulle & Antonio, 2015).

Not everyone was convinced, however. Upon its release, *Laudato Si'* immediately drew critique from both climate scientists and climate skeptics for the way that scientific information regarding climate change was presented. It has been noted that *Laudato Si'* tended to show the most conservative estimates and the least controversial science while others expressed concerns that it underemphasized the anthropogenic nature of climate change, and misleadingly suggested that volcanoes and the sun could have contributed to climate change when, if anything, those factors actually militate against it (Gillis, 2015). In truth, climate change models include multiple scenarios and take stock of numerous variables while excluding others, resulting in varying future predictions (IPCC, 2014). Finally, climate skeptics also expressed concerns about the very legitimacy of a pope or the Roman Catholic Church issuing statements about science, especially when they believe that the science is far from settled (Cornwall Alliance, 2015).

In relation to this, some researchers even suggest that current environmental crises are largely the result of practices perpetuated under the Hebrew-Christian tradition. They blame Genesis for the mandate to subdue the earth and exercise dominion over it, as such a mandate has been used to justify the wanton abuse of natural resources, pollution, irresponsible industrialization, and attendant climate change wrought primarily by Western civilization. Lynn White, in his classic and widely cited 1967 article "The Historical Roots of Our Ecological Crises," alleged that "Christianity is the most anthropocentric religion the world has seen," arguing that anthropocentrism generates ecological crises (White, 1967). However, White considered the medieval St. Francis of Assisi to have been "the greatest spiritual revolutionary in Western history" due to the fellowship and sense of equality he afforded other creatures. To address Christian complicity in environmental crises, he suggested that St. Francis should become the "patron saint for ecologists."

The path of St. Francis will thus provide the avenue by which CST can shift the Christian tradition from a cause of environmental crises to a leader in addressing them. In Laudato Si', Francis draws inspiration from his titular namesake, introducing the text with the saint's Canticle of the Creatures (Francis, 2015a: 1, hereafter referred to as LS). The document decries "excessive anthropocentrism" as causally connected to the environmental problems we are experiencing in our shared home (LS: 115–136), with such an explicit critique of anthropocentrism marking a departure from previous papal writings on the environment. Altogether, the inspirations from St. Francis, combined with the treatment of scientific information on environmental crises, surely break new ground in the Roman Catholic account of sustainability. In this light, we will show how Laudato Si' builds, integrates, and expands upon existing CST elements, and how it develops a new framework of integral ecology to unify these elements in novel ways that also contribute to the secular sustainability literature.

ROMAN CATHOLIC SOCIAL TEACHING (CST) IN RELATION TO SUSTAINABILITY

Laudato Si' develops and integrates multiple strands of thought that are included in CST, of which Church teachings on the environment may be regarded as a specific element. In what follows, we articulate the fundamentals of CST, lay out the general approach to sustainability found therein, and indicate how the Roman Catholic approach intersects with lay models of sustainability. We then identify three themes unique to the Roman Catholic approach—human ecology, peace, and ecological conversion—that predate and inform *Laudato Si'*.

The Fundamentals of CST

CST has been articulated in a set of social encyclicals written by various popes dating back to Pope Leo XIII's *Rerum Novarum*. Papal encyclicals ostensibly have authority on the truth and cover a range of topics; social encyclicals are a certain class of papal encyclical that seeks to "read the signs of the times" and provide teachings on how to follow Christ in the social reality in which we find ourselves. In this light, a number of researchers have applied CST to business ethics and corporate social responsibility (Sison, Ferrero, & Guitián, 2016; Vacarro & Sison, 2011). For our purposes here, we will consider CST as articulated in social encyclicals and other speeches and writings by the three most recent popes: St. John Paul II, Benedict XVI, and Francis.

It should be noted that different scholars and thinkers have categorized the fundamentals of CST in various ways (Cernera & Morgan, 2000; Curran, 2002; McCarthy, 2009; Thompson, 2010). In fact, the differences in methods of categorization may even be found within the Church. The United States Conference of Catholic Bishops (USCCB) in particular identifies seven themes of CST: 1) Life and Dignity of the Human Person, 2) Call to Family, Community, and Participation, 3) Rights and Responsibilities, 4) Option for the Poor and Vulnerable, 5) The Dignity of Work and the Rights of Workers, 6) Solidarity, and 7) Care for God's Creation (USCCB, n.d.). Moreover, The Compendium of the Social Doctrine of the Church organizes these themes into a set of principles and values (Pontifical Council for Justice and Peace, 2004: 49-92, hereafter referred to as CSDC) and adds subsidiarity, the principle that encourages autonomy in decision-making at the smallest organizational level possible (CSDC: 81-83). A more recent, and perhaps more parsimonious, document, The Vocation of the Business Leader: A Reflection, distills CST into two foundational principles: human dignity and the common good (Pontifical Council for Justice and Peace, 2015: 30-37).

The first of these two principles, human dignity, is accorded to human persons based on their nature as *imago Dei*, beings made in the image of God who have immortal souls and a supernatural destiny. This grounding and purpose of ethical treatment of, and regard for, human beings contrasts with many philosophical theories that base ethics and justice on the unique rationality of humanity. In the Christian tradition, and indeed in the Abrahamic tradition, human persons have dignity for reasons that transcend their rationality and intellect. That being said, the Church parts company with many strains of liberalism and especially libertarianism in rejecting the unqualified rights of people to pursue whatever selfish or disordered desire they may happen to have. Furthermore, Church doctrine suggests that rights must be tempered by duties, and that when people seek what is truly good for them, they will not want to secure certain rights, nor would they insist on rights that come at the expense of others. In the CST tradition, rights and duties are balanced for the sake of the common good.

In relation to the common good, the Roman Catholic Church holds that the nature of the human person is socially constituted and that we are created for right relationship, starting with the family. As stated in Genesis, "So God created mankind in his own image, in the image of God he created them; male and female he created them" (1:17). People can thus reach the fullness of life as intended by God only through their relationships with one another, and it is in this sense that humans also mirror God, who is a trinity of profoundly interpenetrated persons. The Church's notion of the common good, therefore, does not require a trade-off with the good of the individual. It does not erase or override the individual as collectivism, totalitarianism, or utilitarianism often does, for the principle of human dignity differentiates this notion of the common good from these other approaches to social welfare. Specifically, what is truly good is not always what people think or want it to be.

Roman Catholics are called to live a life in imitation of Jesus Christ. As such, they ought to behave in an ethical manner and emphasize socially just pursuits, for ethics and social justice lie at the heart of the Gospels and are also critical elements within CST, which in turn places a strong emphasis on love, or caritas, in discerning right actions and relationships. The Latin *caritas*—sometimes translated as charity expresses the notion of love as gift. For Christians, Jesus is God's gift of Himself to the human person for the forgiveness of her sins and her eternal salvation. Love, hereon identified with caritas, denotes the self-gift of God to human persons and the call to emulate this selfgift for others and God. The importance of ethics, social justice, and caritas within CST can thus be seen in Jesus's summary of the entire law in two commandments-first, "love the Lord your God with all your heart, and with all your soul, and with all your mind, and with all your strength"; and second, "'love your neighbor as yourself.' There is no other commandment greater than these" (Mark 12:30-31).

General Approach to Sustainability in CST

These fundamentals of CST form the foundation upon which its unique approach to sustainability is presented in social encyclicals over time. Until *Laudato Si'*, environmentally-related content had been woven into the fabric of other teachings, making the project of mapping a distinctively Roman Catholic approach to sustainability challenging. In general, sustainability concerns in CST have remained tied to social justice considerations with a seemingly anthropocentric outlook. Furthermore, justice in CST is understood as structural, with environmental obligations being connected to integral human development and peace. The Saint Kateri Tekakwitha Conservation Center serves as a great resource for educating society about the uniquely Roman Catholic approach to sustainability. Named after St. Kateri, the first Native American saint who was beatified by St. John Paul II and regarded as the patron saint of the environment and ecology, the Center is dedicated to advancing a Roman Catholic approach to the environment that also integrates justice concerns, and serves to compile key documents that enable us to distinguish Roman Catholic from non-Roman Catholic approaches. As such, in its *Introduction to Catholic Environmental Justice and Stewardship* (Saint Kateri Tekakwitha Conservation Center, 2000), the Center identifies seven themes of ecological responsibility which are mainly adapted from a 1991 USCCB statement. They are the following:

- 1. a sacramental view of the universe;
- 2. a consistent respect for human life, which extends to respect for all creation;
- 3. a worldview affirming the ethical significance of global interdependence and the global common good;
- 4. an ethics of solidarity promoting cooperation and a just structure of sharing in the world community;
- 5. an understanding of the universal purpose of created things, which requires equitable use of the Earth's resources;
- 6. a special concern for the poor and vulnerable, which gives passion to the quest for an equitable and sustainable world; and
- 7. a conception of authentic development which offers a direction for progress that respects human dignity and the limits of material growth.

These themes, woven into a distinctively Roman Catholic framework in *Laudato Si'*, clarify CST values as they relate to sustainability and provide evidence of a uniquely Roman Catholic approach to environmental issues.

In the context of recent history, St. John Paul II was the first pope to pay considerable attention to our obligations to the natural environment. His two successors, Benedict XVI and Francis, continued in this direction, with St. John Paul II and Benedict XVI delivering most of their environmental statements in Peace Day messages. These three popes attribute environmental degradation to materialist, consumerist, hedonist, greedy, and selfish behaviors, and hold that we are obliged to future generations. Environmental responsibility amounts to a duty to care for creation, to steward resources wisely, and ultimately derives from obligations mapped out in the first chapter of Genesis, which include duties such as fruitful reproduction of the species and dominion over the Earth. Benedict closely ties these two together with the notion of human ecology, while Francis emphasizes and re-conceptualizes the second.

Benedict XVI also began to connect environmental obligations to "integral human development," an idea of Pope Paul VI which he cultivated. Paul VI delineated and defined integral human development as follows: "Development cannot be limited to mere economic growth. In order to be *authentic*, it must be complete: integral, that is, it has to promote the good of every person and of the whole person" (Paul VI, 1967: 14). In a similar vein, for St. John Paul II, the "apex of development is the exercise of the right and duty to seek God" (John Paul II, 1991: 29, hereafter referred to as CA). Thus, in Roman Catholic anthropology, the whole person is fundamentally oriented toward God, and since persons exist in relationship and community, the whole of society should also be oriented toward God.

Benedict XVI also noted how human persons' relationships to one another (morally, culturally, and economically) parallel their relationships to the whole of the created world (environmentally). In seeking to develop humanity, therefore, one must attend to all these elements to be integral. Benedict XVI later labeled this idea "human ecology." In particular, he suggested that the culture that leads to decay in our interconnections is part of the same culture that leads to environmental degradation. That is,

when human ecology is respected within society, environmental ecology also benefits. Just as human virtues are interrelated, such that the weakening of one (virtue) places others at risk, so the ecological system is based on respect for a plan that affects both the health of society and its good relationship with nature. (Benedict XVI, 2009: 51)

Human Ecology. A key characteristic of the Roman Catholic approach to sustainability includes a reframing of the issues in terms of human ecology. Human ecology as a field is not limited to Roman Catholicism, as it includes the interdisciplinary study of the relationship of human persons with the natural, social, and built environments (Marten, 2001). When the Church uses the term "human ecology," she designates the full range of the human environment, especially that

which governs life itself. Benedict XVI, for example, made extensive use of this concept in *Caritas in Veritate*, where he explicitly linked environmental responsibilities to Roman Catholic sexual ethics and views on reproduction and natural death.

Supported in general by the principle of human dignity, human ecology has been evolving in CST and has taken on various meanings in the writings of different popes. As we will see, it is a forerunner to the concept of integral ecology that became so central to *Laudato Si'*.

St. John Paul II first introduced the term "human ecology" in the encyclical *Centesimus Annus* (CA: 38). In this articulation of human ecology, he does not immediately discuss the family or sexual ethics; rather, he focuses on the "social structure," on "structures of sin" (CSDC: 119), and identifies a "social ecology' of work" (John Paul II, 1987: 36). For him, the human environment includes the built environment in which people work and live in community, an environment that can be infused with love and ethics or corrupted by sin. This idea is preceded by a section calling for better care of creation, and is succeeded by a section on the importance of family and marriage as the foundation of an authentic human ecology.

For Benedict XVI, human ecology pertains mainly to the entire life cycle from conception to natural death, and concerns the practices supporting or inhibiting reproduction at the beginning of life as well as care at the end of life. As such, science and technology, social norms, political laws, and economic behaviors may be more or less ethical depending on their support of life and a culture of life rather than a culture of death. On this view, the institution of the family, including marriage and sexual ethics, should be governed by natural moral laws that express a right order intended by God for the human being. In addition, the focus on life in Roman Catholic ethics should be situated within the teachings of a pro-life consistent ethic opposing war, capital punishment, murder, genocide, and abortion. In this sense, human ecology incorporates and extends beyond the boundaries of sustainable development and its four dimensions of economy, society, culture, and environment.

Peace. Before Laudato Si', CST connected all the pillars of sustainability to peace. Human ecology, environmental responsibility, and integral human development depend on and further peace, which should be understood much more as "an enterprise of justice" rather than the absence of war (Paul VI, 1965: 78). Justice, in turn, will be integral to Francis's notions of sustainability in Laudato Si'.

St. John Paul II's first major statement about the environment, entitled "Peace with God the Creator, Peace with All of Creation," was delivered on the World Day of Peace in 1990. This document placed "the ecological crisis ... within the broader context of *the search for peace*." Thus, because environmental issues are interdependent with other issues and apply globally, the responsibility to deal with these concerns inheres in everyone. Such responsibility, however, requires solidarity to be exercised, which includes cooperation between nations and attention to the structural bases of poverty (John Paul II, 1990).

St. John Paul II also indicated that contemporary weapons of war pose severe dangers to the environment that could extend globally. This message notably critiques the misapplication of technology, including "indiscriminate genetic manipulation" of organisms and "the unscrupulous development of new forms of plant and animal life" (John Paul II, 1990).

Benedict XVI developed further the idea that environmental protection should be regarded under the rubric of peace, but proceeded to connect obligations to the environment with other obligations to respect life. He thus linked environmentalism with the consistent ethic of life under the rubric of human ecology: "It should be evident that the ecological crisis cannot be viewed in isolation from other related questions, since it is closely linked to the notion of development itself and our understanding of man in his relationship to others and to the rest of creation" (Benedict XVI, 2010: 5).

Ecological Conversion. Other ideas important to the Roman Catholic approach to sustainability include an emphasis on ecological conversion and social sin. Both these ideas were strongly developed by St. John Paul II (John Paul II, 1984: 15–16, hereafter referred to as RP) and were most recently elaborated upon by Francis. With regard to social sin, St. John Paul II shared that "from one point of view, every sin is personal; from another point of view, every sin is social insofar as and because it also has social repercussions" (RP: 15). In the *Compendium of the Social Doctrine of the Church*, social sin "is every sin committed against the justice due in relations between individuals, between the individual and the community, and also between the community and the individual" (CSDC: 118).

Even prior to writing *Laudato Si'*, Francis began to connect social sin with ecological conversion. For him, ecological conversion is a way of responding to the destruction of the environment which in itself amounted to a sort of social sin:

This is one of the greatest challenges of our time: conversion to a development that respects Creation. In America, my homeland, I see many forests, which have been stripped ... that becomes land that cannot be cultivated, that cannot give life. This is our sin: we exploit the earth and do not let it give us what it harbors within, with the help of our cultivation. (Francis, 2014)

Sustainability outside of CST. A major impetus for secular sustainability began with the Brundtland Report (WCED, 1987), which defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Here the sustainability movement transcends the environmental movement that predated it by recognizing the interdependence of environmental matters with broader development objectives. Thus, the new view of sustainable development combines the three pillars of environmental protection, social equity, and economic growth. These three must be pursued in tandem, as they are interdependent and mutually reinforcing (Sustainable Kingston, 2012), and it is inherent in the Brundtland report that neglecting one pillar jeopardizes the others over the long term.

More recently, a cultural aspect to the relevant dimensions of sustainability has been added to the secular concept of sustainability. This inclusion came about because of the realization that indigenous peoples, members of non-dominant societies at the margins of the global market, and alternative worldviews risk cultural, ideological, and literal extinction (Hawkes, 2001) and therefore merit sustainability consideration.

Nevertheless, this secular definition of sustainability can be expanded by considering specific principles of CST together with the recent notion of "integral ecology" proposed in *Laudato Si'*. Figure 1 depicts the evolution of sustainability concepts within a primarily CST framework. It summarizes the central concepts related to sustainability and justice as generally represented in CST and in recent papal writings. This evolution is then shown in relation to the secular concept of sustainable development.

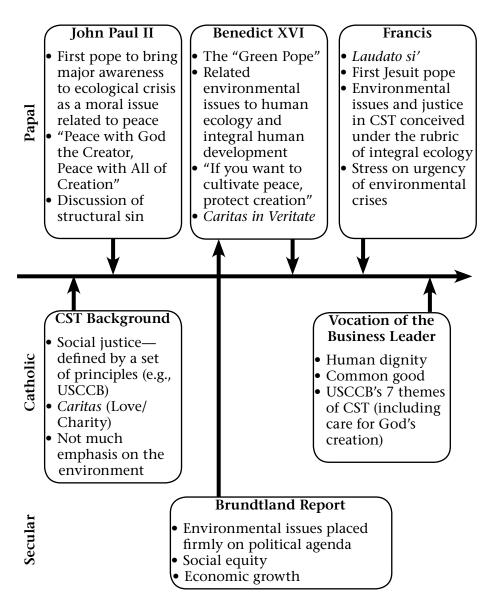


Figure 1: Evolution of Sustainability Concepts/Thoughts

LAUDATO SI' AND INTEGRAL ECOLOGY

The Integrating Role of the Spiritual Exercises

Laudato Si' builds upon existing CST related to sustainability while also contributing new ideas, and one of its most important conceptual

evolutions includes a shift from human ecology to a notion of integral ecology. In fact, the term "human ecology" is rarely used in this encyclical; instead, the notion of integral ecology becomes a central conceptual framework for *Laudato Si'* as a whole. Integral ecology integrates and develops prior papal treatments of environmental obligations, integral human development, human ecology, and peace. This concept and framework may constitute Francis's unique contribution to CST and furnish us with a conceptual apparatus for differentiating Roman Catholic from non-Roman Catholic approaches to sustainability in general.

The very meaning of the word "integral" has a twofold sense: 1) honest, fair; and 2) complete, entire, whole. In utilizing this concept, *Laudato Si'* references the great tradition of virtue ethics that forms an important theoretical grounding for CST. Integrity is itself a virtue; likewise, ecology is a more complex term than common usage ordinarily connotes—the terms "economics" and "ecology" are words that are rooted in the Greek word *oikos* which means *home*.

It is thus helpful to consider the meaning of integral ecology in light of the title and first line of *Laudato Si'* by which Francis directly addresses God—translated into English, it means "Praise Be to You!" The encyclical invites us to orient our understanding of ecology toward the praise of God, specifically a Trinitarian God, and further reminds us that all of our endeavors in society and indeed in all of creation ought to be ordered and directed toward the same. This approach of praise rests fundamentally on the *Spiritual Exercises* of St. Ignatius upon which Ignatian spirituality is founded, and with which the life of a Jesuit such as Francis must be deeply infused.

The first principle and foundation of the Exercises begins thus: "The human person is created to praise, reverence, and serve God Our Lord, and by doing so, to save his or her soul" (Ganss, 1992). Given the title of *Laudato Si'*, Francis begins the encyclical from a standpoint of praise, and much of the subsequent text likewise emphasizes reverence and service. The next part of the first principle then reads as follows: "All other things on the face of the earth are created for human beings in order to help them pursue the end for which they are created." Therefore, while ecology ordinarily refers to the science of ecosystems, the natural world in the Roman Catholic worldview is understood as a created world, gifted to the human person who is also a created being. In the language of Ignatian spirituality, human persons are to utilize these gifts to praise, reverence, and serve God. The entire encyclical thus presents a concerted account of how human persons might structure their relationships

toward each other, society, culture, economy, and the environment in view of the ultimate purpose for which they were created.

Economic Injustice, Technocracy, and Anthropocentrism

Laudato Si' takes an integral approach partly by locating environmental issues in relationship with economic and social ones, among others. The chapter entitled "Integral Ecology," for instance, identifies a set of ecologies (environmental, economic, social, cultural, daily life) and articulates their interconnection in light of the common good and intergenerational justice. Integral ecology is concerned with the whole of ecology, and in the Roman Catholic worldview, that whole is a creation willed and ordered by God. According to this view, human persons ought to arrange their affairs, attitudes, habits, activities, processes, and policies in accordance with praise, reverence, and service.

Laudato Si' also builds on the critique of the current economic system laid out in Evangelii Gaudium (Francis, 2013: II:1; IV:2, hereafter referred to as EG), where Francis admonishes those responsible for abuses in finance and the markets that have tended to lead people to over-consume and waste material resources while marginalizing and excluding others. Just as Evangelii Gaudium followed previous papal encyclicals (e.g., Laborem Exercens, Caritas in Veritate), Laudato Si' serves to put the economy in its proper place as a dimension of human flourishing the tools of which serve as means to wellbeing.

As with *Evangelii Gaudium*, *Laudato Si'* also places emphasis on impoverished populations and equality considerations, taking care to turn one's focus unto those most excluded from participation in the benefits of an economy. Francis even argues that the global North owes an ecological debt to the South, thereby making environmental justice a key element of his message (LS: 51–52). Throughout *Laudato Si'*, an analogy is drawn between the environment itself and the poor (LS: 170, 190) as both remain vulnerable and neglected in contemporary paradigms of dominance (LS: 2, 48). The encyclical also offers several critiques of elements in global society that need to change, specifically what Francis calls the technocratic paradigm, a culture of consumerism and waste, and excessive anthropocentrism. All these elements draw awareness to structures of injustice in need of transformation.

Inspired by the philosophy of Romano Guardini (1998), Francis directs incisive attention to the technocratic paradigm. He acknowledges the great value of science and technology, but indicates that they should not be relied upon exclusively or unreflectively as the solution

to environmental problems. Essentially, his view seems to be that they should be regarded as means and not as ends. It is a critique of the technocracy that parallels a longstanding assessment of unjust economic structures in CST, namely that the economy should serve as a means to the end of human wellbeing. Moreover, he implies that an alliance between science/technology and finance/economics emphasizes utilitarian values that undermine human dignity and the common good. Danger adheres in such tool-cultivating disciplines such that human persons themselves may devolve into tools, instruments in the hands of the craftsmen of programs that seek to aggregate total consumer satisfaction. Oftentimes, the outcomes of such projects may not authentically yield advances in social welfare.

Drawing on *Evangelii Gaudium* and the writings of previous popes, *Laudato Si'* also makes a connection between how consumerism and waste impact the environment and the poor. It is noted in *Evangelii Gaudium* that these "problems [of pollution and waste] are closely linked to a throwaway culture which affects the excluded just as it quickly reduces things to rubbish" (EG: 22). As a result, human persons within a technocratic paradigm become instrumentalized by such a culture, with they themselves "considered [as] consumer goods to be used and then discarded. We have created a 'throw away' culture which is now spreading.... The excluded are not the 'exploited' but the outcast, the 'leftovers'" (EG: 53).

This "throw away" culture might be due to the misunderstanding of "anthropocentrism." For Francis, excessive anthropocentrism refers to a mistaken interpretation of Genesis as advocating domination rather than stewardship. In Laudato Si', he emphasizes the duties to "till and keep," cultivate and preserve (LS: 67), and an understanding of nature as a creation with its own intrinsic order. Nevertheless, such a critique of excessive anthropocentrism does not depose humans from inhabiting a privileged role in this order. Unlike non-anthropocentric accounts, CST continues to link environmental issues with obligations to other humans, specifically the poor. During Francis's address to the UN General Assembly (Francis, 2015b), he shared that "the poorest are those who suffer most from such offenses, for three serious reasons: they are cast off by society, forced to live off what is discarded, and suffer unjustly from the abuse of the environment. They are part of today's widespread and quietly growing 'culture of waste.'" The implication is that the natural environment ought to be regarded as a gift to meet the legitimate needs of all human persons.

In the same address, Francis also furthered his critique of excessive anthropocentrism by advocating a *right of the environment*. He justified this right on two grounds: 1) human persons depend on the environment in that it has instrumental value for all people; and 2) creatures have intrinsic value, both in themselves and in their interconnection in creation. As with *Laudato Si'*, Francis in his address to the U.N. observes how environmental harm is connected to social and economic exclusion. Both documents, following a considerable body of CST, view integral ecology as encompassing "integral human development" in consideration of both the material and spiritual needs of human persons.

A Dynamic of Structural Injustice and Ecological Conversion

All these critiques of existing practices are related to CST notions of justice as structural. In other words, entire systems exist in which individuals collectively participate in structures of sin, with each one playing small but necessary roles and taking actions that accumulate in broad scale damage. Conversion, which requires a complete shift to attitudes, priorities, and ways of life that are best expressed by the first principle and foundation of St. Ignatius (Ganss, 1992), is therefore necessary to better receive the gifts of God's grace that enable human persons to co-create with Him in their response to injustice. This is because while all persons are individually responsible for their choices, collective movements are ultimately needed to transform these structures. Indeed, such a dynamic between sin and grace reveals a striking resonance between *Laudato Si'* and the *Spiritual Exercises*.

Avenues toward positive environmental change are mapped out in the final two chapters of *Laudato Si'*. Emphasis is placed on the obligation to promote dialogue across disciplines, spheres, societies, etc., and it is here that Francis calls for an ecological conversion. In the final chapter, he emphasizes the importance of wonder, praise, reverence, and contemplation in general. There is a return to prayer, worship, and a sacramental approach to inspire more care for the environment, a return to the orientation laid out at the beginning of the encyclical: Praise be to you, my Lord!

Integral Ecology: A Model

Figure 2 shows how the concept of integral ecology is related to both the secular sustainable development paradigm and prior teachings on the environment and justice in CST. The left side of the triangle shows a progression of thought in the sustainable development literature, with the past represented at the bottom of the triangle and the future at the top, while the right side of the triangle shows a parallel progression of thought in CST. Both sides of the triangle are then integrated by *Laudato Si'*, with all the dimensions of integral ecology that correspond

in various ways to the ideas on either side of the triangle found at the center. Ultimately, the principle of praise from the *Spiritual Exercises* that also figures in the title of *Laudato Si'* serves as the apex and integrating theme of all these ideas. Ignatian Spirituality informs the entire project of *Laudato Si'*, and is therefore represented at the top of the triangle.

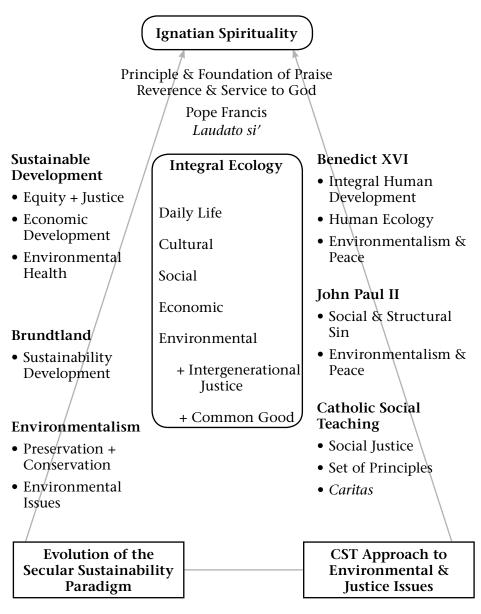


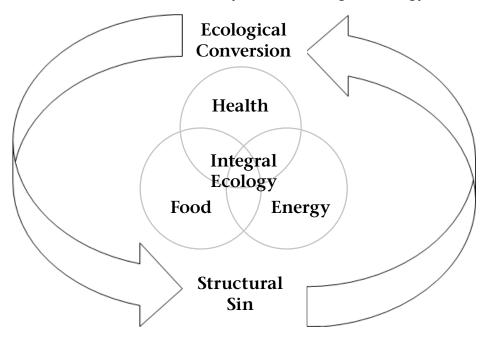
Figure 2: Laudato Si' Integrates Sustainability with CST with an Ignatian Focus

INTEGRAL ECOLOGY AS AN ANTIDOTE TO BUSINESS "UN-SUSTAINABILITY"

In contrast to the conceptualization of sustainability described within CST, the non-Roman Catholic approach to the sustainability paradigm (Afgan & Carvalho, 2010) often focuses on only one of the four pillars of sustainable development, namely that of environmentalism. In the minds of many, sustainability simply equates to environmentalism (Werbach, 2009), with one definition of environmentalism referring to itself as a "social movement and associated body of thought that expresses concern for the state of the natural environment and seeks to limit the impact of human activities on the environment" (Levy, 2010). Due in part to this interpretation, many environmentalists in North America have been accused of valuing other species over poverty considerations.

In line with this, many businesses use the trendiness of the term "sustainability" to advance their interests. We suggest, however, that the evidence often points to effects that are the reverse of their stated intentions, to a sort of "un-sustainability." Moreover, strategic co-option by businesses in the form of greenwashing (Delmas & Burbano, 2011) has yielded widespread suspicion of business pretensions for sustainability. Such greenwashing invites concerns about profit being the real goal alongside a superficial focus on people and the planet deployed for marketing purposes. As a result, underserved or invisible stakeholders may be marginalized by supposed business sustainability. Indeed, such co-option of the sustainability concept is connected with another usage of the term in business—"sustainable competitive advantage," where what is to be sustained is financial success, not environmental or social welfare.

Food, health, and energy, for instance, may be regarded as key dimensions of a sustainable humanity. These domains of human concern can be considered within a CST framework, particularly as they were the focus of the 2014 Vatican conference on sustainable humanity and nature. Yet many companies in these sectors have engaged in unsustainable practices, leading us to believe that these businesses, industries, and sectors need to reorient their activities to pursue the authentic good of the human being. To contribute to the integral ecology of which Francis speaks, these institutions could reconceptualize their purposes and redesign their practices with the help of the concepts of integral human development and peace. For such a change to happen, however, ecological conversion will be necessary among institutions' stakeholders, and the topic should be brought up in meaningful dialogues across sectors. Figure 3 shows how we can conceive of the overlapping concerns of these three essential domains as potentially being interwoven and balanced in an integral ecology so that greater harmony could be cultivated. Here the dynamics of grace and sin, or ecological conversion and structural sin, mediate the ways in which these domains interact with each other and either serve or fail to praise the Creator. Structural sin is the tendency that leads to a disordering of right relationships, whereas ecological conversion necessitates a continual re-evaluation and commitment to re-order relationships and activities toward God. Reducing structural sin and stressing dimensions of ecological conversion would thus facilitate the integral ecology of food, energy, and health issues within these two dimensions.



Un-Sustainable Humanity Becomes Integral Ecology

Figure 3: Unsustainable Humanity Becomes Integral Ecology

Despite supposed good intentions, therefore, institutions misrepresent the underlying purpose of sustainability if they use the term "sustainability" to justify systems that result in "un-sustainable" consequences. CST offers an antidote to these dehumanizing trajectories through its emphasis on human dignity, the common good, and *caritas*. It returns the focus of sustainability to social justice, where justice is understood as structural and where environmental obligations are connected to integral human development and peace. Francis thus calls

on us to counter prevailing unjust systems with a structural reordering of multiple ecologies: environmental, economic, social, cultural, and daily life. His notion of integral ecology encompasses a set of ideas extant in CST in such a way as to change the focus and scope of sustainability, one that institutions, stakeholders, and people should take into consideration to improve the ecological health of the planet. In the end, integral ecology aims to bring multiple dimensions into a cohesive harmony proper to a created universe, beheld from the standpoint of praise, reverence, and service to God.

DIRECTIONS FOR FUTURE RESEARCH

Future research should follow the spirit of the 2014 Vatican conference on sustainable humanity and nature, and investigate the domains of food, health, and energy in light of the concept of integral ecology developed in *Laudato Si'*. For example, studies may be done on companies in certain industries that affect many aspects of the global culture and economy in addition to the environment, such as those in biotechnology, fossil fuels, and big pharmaceuticals. If there are examples of controversial business activities in these industries that may not cohere with the principles of CST, such practices could be evaluated as to how they advance or diminish an integral ecology.

Future research should also explore the notion of sustainable humanity as it relates to integral and human ecology. Such conceptual projects could examine the evolution of CST in relationship to secular concepts, including those in the domain of human ecology. Theoretical studies could also develop models of how the domains of food, health, and energy could be brought together more harmoniously and synergistically within a systems thinking perspective. Finally, the pertinence of the integral ecology concept to secular conceptions and practices should also be evaluated.

CONCLUSION

This research study has aimed to demonstrate how *Laudato Si'* contributes to both the existing body of Roman Catholic Social Teaching and the sustainable development literature, particularly through the notions of integral ecology and the first principle and foundation of the *Spiritual Exercises* of St. Ignatius. The former offers a uniquely Roman Catholic contribution to sustainable development while strengthening existing CST ideas. The latter places a Jesuit stamp on this special approach to sustainability.

The notion of integral ecology constitutes an important evolution in CST regarding sustainability. It incorporates a wider variety of CST concepts such as integral human development, peace, structural justice, an ethic of life, human ecology, and ecological conversion. Integral ecology thus makes for a broader conception of sustainability that applies to multiple ecologies (environmental, economic, social, cultural, and daily life) while maintaining a key focus on justice and the common good.

Integral ecology also provides an improved rubric relative to the existing sustainable development paradigm because it integrates justice considerations more thoroughly, allowing CST to avoid some of the pitfalls of said paradigm regarding un-sustainable business practices. Integral ecology thus serves as an antidote to business un-sustainability because it requires more thorough and earnest incorporation of multiple ecologies. Moreover, the Roman Catholic dynamics of grace and sin allow for a process of continual evolution as integral ecology is advanced.

In *Laudato Si'*, Francis implicitly draws from the *Spiritual Exercises* of St. Ignatius. The first principle and foundation of the Exercises thus serves as an integrating principle for the encyclical—even its title embeds an orientation toward praise of the Creator—and grounds it in a uniquely Roman Catholic approach to sustainability. Francis's work, therefore, of blending Ignatian spirituality with the inspirations of St. Francis of Assisi has resulted in a reconceptualization of sustainability.

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INEQUALITY, DIGNITY, AND THE SUSTAINABILITY CHALLENGE

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Abstract. The world is facing significant threats from inequality and climate change, both of which are potential sources of societal and civilizational instability. Sustainability crises will most likely affect the poorest in the world much more than the wealthy. Furthermore, a fundamental reason why poverty and growing gaps between the wealthy and the poor are problematic is that poverty too often has the effect of violating the dignity of the poor. Today's business system fosters ever more materiality, consumption, and product churn, externalizing whatever costs it can and thereby placing those costs into societies and the natural environment. This article argues that greater attention to the dignity of humans and, indeed, of all beings, along with systemic changes that incorporate new measures of progress and performance, the internalization of currently externalized costs, the provision of decent work, and the consideration of ecological costs, among other shifts, could help businesses transition the world to a more equitable and sustainable context.

Keywords: corporate responsibility; sustainability; inequality; dignity

INEQUALITY AND SUSTAINABILITY

According to Jared Diamond, who has thoroughly investigated why civilizations collapse (in a book aptly entitled *Collapse*), there are two main things that push societies and civilizations off the cliff toward self-

destruction. One is growing gaps between rich and poor, i.e., growing inequality. The other is civilizations or societies pushing natural resources beyond what can sustain them, i.e., a lack of sustainability (Diamond, 2005). In a sense, a lot of data indicate that a grand experiment testing both of these limits is currently underway on a planetary scale, potentially putting humankind into an existential crisis.

This conceptual essay integrates a growing array of literature on inequality, dignity, and sustainability, making important linkages across these domains. It argues that considerations of dignity, inequality, and sustainability need to be incorporated into future managerial decisions. Finally, it posits that major system change is needed, and points to some of the ways in which such change is already beginning and how it might be enhanced in the future.

SUSTAINABILITY AND CLIMATE CHANGE CRISES

The sustainability and climate change crises facing the world continue unabated despite much conversation about sustainability. The 2014 IPCC (Intergovernmental Panel on Climate Change) report (IPCC, 2014) highlights the current state of affairs in no uncertain terms. Anthropogenic (human caused) emissions of greenhouse gases are higher than ever, their increase evident since the beginning of the industrial era and "driven largely by economic and population growth" (IPCC, 2014: 4). The warming of the climate system is, in the IPCC's terms (and despite naysayers' doubts), "unequivocal"—ecological systems around the globe are experiencing the impacts of climate change (whatever its source), including changing precipitation levels, melting glaciers and icecaps, and shifts in the water supply. Both land and sea creatures and plants are shifting habitats to accommodate the changing climate. Extreme weather events have become increasingly common, notes the IPCC, including increases in temperature, increases in the frequency of hot spells, and more "heavy precipitation events." On a solemn note, the IPCC comments:

Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks. (IPCC, 2014: 8)

Drivers of Future Climate

Key drivers of future climate, according to the IPCC, include cumulative CO₂ emissions, which are linked to socio-economic development as well as climate policy shifts. Numerous impacts are detailed by the IPCC to occur if sufficient changes do not take place to reduce these anthropogenic sources of climate change; among them are longer and more frequent heat waves, ocean acidification and warming, sea level rise, and more frequent and intensified extreme precipitation events. Systemic risks include vulnerability of human systems to weather events and species extinction, which scientists believe is already going on at a massive scale in what is called the sixth great extinction (e.g., Barnosky et al., 2011; Eldredge, 2001). There is significant potential for the undermining of food security, the exacerbation of existing health problems, heat stress, extreme precipitation, flooding, landslides, air pollution, increased drought and water scarcity, rises in sea level, and risks from storm surges, particularly for those people living in areas that lack proper infrastructure and services (IPCC, 2014). Nor are these shifts expected to be short-lived; indeed, the IPCC expects that they will continue over the next hundreds of years, even if humankind stopped emitting greenhouse gases today.

COP 21

In December 2015, the world's nations reached agreements to reduce sustainability impacts to (supposedly) keep temperature increases below 2° Celsius, a number at which it is hoped that the most negative impacts of climate change can be mitigated. COP stands for Conference of the Parties, an acronym that refers to countries that agreed to the 1992 U.N. Framework Convention on Climate Change meetings (United Nations, 2015). Important aspects of the COP21 agreements include mitigation of temperature increases, transparency in accounting for climate action, adaptation to strengthen nations' ability to deal with and recover from climate impacts, and support, including financial, so that nations can build clean and resilient futures (United Nations, 2015).

Many lauded the COP21 agreements as a turning point. COP21 was certainly far more successful than related earlier attempts to deal with climate change. Indeed, as the IPCC noted, changes already underway are unlikely to be stopped any time soon. Yet others argued that there are significant issues that still need to be dealt with—and quickly—to avoid the worst effects of climate change. Critics also noted that the difficult part of the agreements, as far as they go, lay in implementation (e.g., Mabey, Burke, Gallagher, Born, & Kewley, 2015) because countries and their constituents, including multinational companies, have to

change their practices significantly to attain real climate mitigation. The *Guardian* reported in the aftermath of COP21 that many analysts and environmentalists believed that the agreements are "too weak to help the poor" (Harvey, 2015), a criticism that particularly stings given how the U.N.'s IPCC (2014) report on climate change documented that the poor will be most negatively and dramatically affected by the impacts of a changing climate.

THE SUSTAINABILITY LINK TO INEQUALITY

The second main factor in civilizational collapse (Diamond, 2005) is growing inequality, i.e., ever-widening gaps between rich and poor. Inequality is systemic, as are sustainability problems, and they are increasingly recognized as related issues. A key to understanding the worst *impacts* of climate change on the planet is to understand that the poor will be much more dramatically affected than will the rich. This important point is made explicit by the IPCC, which directly links the sustainability challenge to the problem of (growing) inequality in the world:

Climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development. (IPCC, 2014: 13)

In 2015, Pope Francis's encyclical *Laudato Si'* directly addressed the climate change and sustainability crises links to inequality. He called upon humanity to create action and dialogue about what he termed one complex problem—integrally related environmental and social issues of sustainability and poverty/inequality, stating clearly that there is "an intimate relationship between the poor and the fragility of the planet." He further notes, as physicists have (e.g., Capra, 1995; Capra & Luisi, 2014), that "everything in the world is connected" (Francis, 2015: sec. 16). Francis in a crucial insight wrote: "Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature" (Francis, 2015: sec. 139).

INEQUALITY AS A SYSTEMIC ISSUE

Inequality continues to grow, both within the United States and globally, and the problem increasingly has to do with the ways in which business and economic systems are structured. A 2016 report by Oxfam puts it unequivocally: "The gap between rich and poor is reaching new extremes. The richest 1% now have more wealth than the rest of the world combined. Power and privilege [are] being used to skew the economic system to increase the gap between the richest and the rest" (Oxfam, 2016: 1).

Growing Inequality

The U.S. now has greater inequality than about 70% of the world's other countries, with gaps between rich and poor rising since about the 1970s. Indeed, close to three quarters of wealth in the U.S. is owned by the wealthiest 10% of the population, with some 35% owned by the top 1%, and a startling 22% of total wealth by the 0.1%. Such numbers fueled the Occupy movement, which came to prominence in 2011 with its new meme about the 99% v. the 1%. Both wealth (i.e., the total stock of assets owned by people) and income inequality gaps have been increasing in the years following the Global Financial Crisis of 2007–2008 (GFC) and the Great Recession (Saez & Zucman, 2014, 2016). Indeed, Saez & Zucman (2014, 2016) demonstrate levels of wealth inequality comparable to levels in the "roaring twenties," just before the stock market crash of 1928 and the ensuing Great Depression.

Shrinking Middle Class

There is other troubling data. The Pew Research Center released a disquieting report at the end of 2015 that demonstrated that the American middle class was no longer in the majority, a trend which the report claimed "could signal a tipping point" (Kochhar, 2015). This trend was confirmed by Saez & Zucman (2014; 2016), who also note that despite middle class home ownership and pension funds, debt associated with mortgages and student loans is much higher than in earlier years. And while the Pew report finds that there has been growth in the upper tier, that finding is problematic in that 49% of aggregate U.S. income devolved to the upper tier while the middle declined from 62% in 1970 to 43% in 2014. These trends are more startling in that, in the U.S., the top 1% of earners now earn more than 20% of all income and the 400 richest Americans control more wealth than the 150 million least well off (Reich & Kornbluth, 2013).

A Global Problem

The problem is not confined to the United States. Another report by the Pew Research Center notes that although some 700 million people around the globe have "stepped out" of poverty, they have only done so "barely," meaning that they may no longer be living in "extreme" poverty but are still poor (Kochar, 2015). The same report also finds that while the middle income population has increased worldwide, most people have remained poor, with 15% of the world's population living on less than \$2.00 a day and 56% at the "low income" level of between \$2.01 and \$10.00 a day. Moreover, the pathbreaking work of Thomas Piketty warns of the possibility that structural conditions in the economy will continue to fuel ever-greater wealth gains by the already wealthy at the expense of the rest of the population (Piketty, 2014).

Global Jobs Crisis

These data suggest that inequality, both in the U.S. and globally, is in many ways as problematic as climate change. Both are potential sources of societal and civilizational instability—inequality can lead to civil unrest, particularly if there are not enough jobs to support people.

A 2014 report by the World Bank¹ warned that the world is possibly heading for a global jobs crisis: some 600 million jobs need to be created simply to keep up with population growth in the G20 alone, where there are already more than 100 million people unemployed and nearly 450 million living on less than \$2/day. An International Labour Organization report from 2015 indicated that the global employment situation is likely to worsen between 2015 and 2020. Some 201 million people were unemployed in 2014, more than 31 million more than before the GFC. Furthermore, some 61 million jobs have been lost since the crisis, meaning that nearly 280 million new jobs need to be developed by 2019 simply to close the gap created by the GFC. The situation is particularly problematic for young people, as almost 74 million young people (15–24) were seeking work in 2014. In addition, seemingly inexorable forces are shaping business and economics today, including global economic integration and technological changes that are shifting the number, type, and nature of jobs in both the developed and developing world

¹https://www.rte.ie/news/business/2014/0909/642408-world-bank/ (accessed March 7, 2017).

(e.g., Rifkin, 2014; Pinney, 2014). Even what we think of as high-skilled jobs, like much of the work of junior lawyers, accountants, technologists, and some doctors, can now be outsourced or off-shored, with the resulting reduction of positions creating disruptions in numerous local economies (albeit others might benefit to some extent).

Inequality combined with lack of productive work for so many could even result in social collapse, as Jared Diamond (2005) dramatically argues. Protests like the Arab Spring, Occupy, and in Spain, Egypt, and Greece, among others, suggest the discontent that can erupt—and spill into civil disruption—if equity and employment are not dealt with effectively at the policy level. And even if collapse does not happen, keen observers like Piketty and Saez & Zucman warn of a "dystopian future" in which the rich/poor gap continues to widen (Piketty, 2014; Saez & Zucman, 2014). The vast majority of people, the bottom 90%, own very little, and can potentially experience quite readily a significant lack of dignity in the way that they are treated and positioned in their societies. It is to the question of dignity that we now briefly turn.

DIGNITY, POVERTY, BUSINESS, AND SUSTAINABILITY

A fundamental reason why poverty and growing gaps between the wealthy and the poor are problematic is that poverty too often has the effect of violating the dignity of the poor (e.g., Moellendorf, 2009). Roman Catholic Social Teaching, many activist civil society organizations like Amnesty International and Civicus, and multilateral organizations like the United Nations (among others) have argued for the dignity of all persons for many years. That conversation, however, has typically played only a minor role in the ways that modern business and economic systems have evolved. Indeed, dignity violations occur regularly in businesses even when people do have jobs. These are evident in the existence of sweatshops, worker exploitation, the lionization of abusive bosses by the business media, industrialized production and service (e.g., call center) systems that dehumanize workers, and other degrading conditions, including unemployment that comes from efficiency and productivity increases. Frequently upholding dignity and reducing dignity violations have been low or nonexistent priorities in businesses and economics (e.g., Hahn, 2012).

Dignity as a Foundational Value

The separation of dignity, inequality, and sustainability, however, has begun to shift as various global actors realize how interlinked all

of these aspects of human civilization are. Dignity is defined as the inherent value, worth, and vulnerability of human beings (Hicks, 2011). Hicks argues that every human being, no matter what his or her station in life, is born with dignity and is therefore worthy and deserving of being treated with dignity. Pirson & Dierksmeier (2014: 550) suggest that dignity is comprised of "priceless aspects of humanity—including character, virtue, integrity (moral, physical, psychological), knowledge, wisdom, love, trust, or forgiveness." The concept of human dignity is also associated with four fundamental rights—freedom, shelter, provision, and self-esteem (Hahn, 2012). The problem is that despite being born worthy of dignity, people are also vulnerable to dignity violations that degrade, dehumanize, or instrumentalize them (Hicks, 2011).

Hicks, who has studied dignity and its violations globally, differentiates dignity from respect. She argues that everyone has inherent dignity, no matter who they are or what they do, but that respect must be earned. Respect is accorded to people who have done something admirable, inspirational, or otherwise positively notable.

Linking Dignity and Sustainability

It is clear from the definitions above that dignity is fundamental to a humanistic conception of human beings. Yet the links among dignity, poverty, and sustainability have hardly been addressed in the context of business. In the early 2000s, scholarship about the so-called "bottom [or base] of the pyramid," generated by the work of C. K. Prahalad and Stuart Hart (Hart & Prahalad, 2002; also Prahalad & Hammond, 2002, 2004), raised the issue of how businesses might profitably serve the poor. The BOP framework advocated business models specifically aimed to help people living in poverty raise their standard of living and potentially lift them out of poverty, thereby (implicitly) potentially enhancing their dignity. Unfortunately, many of the proposals for BOP strategies tended to increase, rather than reduce, the ecological (or sustainability) impact of products (Kolk, Rivera-Santos, & Rufín, 2013).

Focusing explicitly on sustainability, Hart & Milstein (2003) developed what they termed a sustainable value framework. It links the creation of shareholder value with sustainability, defining a "sustainable enterprise [as] one that contributes to sustainable development by delivering simultaneously economic, social, and environmental benefits—the so-called triple bottom line" (Hart & Milstein, 2003: 56). This model, however, does not make the further link to enhancing the status and dignity of the poor, although Hart (2005) does make this link in his book *Capitalism at the Crossroads*.

Dignity at the Bottom of the Pyramid

Over time, the focus of interest in the bottom of the pyramid shifted from *serving* the poor to business strategies and marketing *toward* the poor (Kolk et al., 2013). While there is some indication of positive economic and social results from BOP initiatives in the study by Kolk et al. (2013), most research has not really addressed outcomes. One conclusion is that BOP initiatives recognize the poor mainly as ways to add more value to companies' bottom lines, with any enhancements of dignity occurring as a by-product (Hahn, 2012). In fact, Karnani (2005) argued that there was no "fortune" at the base of the pyramid, and that most so-called BOP strategies were actually ways for businesses to make more money targeting this potential market.

There have been some efforts that aim to enhance multinational corporations' and other businesses' treatment of the poor, e.g., providing what the International Labor Organization calls "decent work" (see Kolk & Van Tulder, 2006). The U.N. Global Compact, which now has about 12,000 signatories (including 8,000 businesses), developed ten foundational principles meant to foster human and labor rights, environmental sustainability, and anti-corruption.² Six of these principles focus on labor or human rights; the tenth emphasizes working against all forms of corruption, including bribery and extortion, which are clear dignity violations. Seven of the U.N. GC principles, therefore, can be construed as explicitly upholding or fostering dignity. On the other hand, the other three principles emphasize environmental issues which Pope Francis (2015) cogently notes are inextricably linked with equity issues; therefore, they also support a dignity link.

Human Rights and Dignity

Human rights receive prominent mention in the U.N.'s Guiding Principles on Business and Human Rights.³ This framework explicitly states the need for businesses to *respect* human rights as expressed in the International Bill of Human Rights and various ILO conventions, *protect* against business-related human rights abuse, and *remedy* problems when they are uncovered.

Perhaps the linkages among sustainability, inequality, and dignity are made most clear in another set of U.N. initiatives, the eight

²U.N. Global Compact (www.unglobalcompact.org).

³Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework (http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf).

Millennium Development Goals (MDGs [which expired in 2015]) and the subsequent 2016–2030 Sustainability Development Goals (SDGs) which replaced them.⁴ The SDGs are systemic goals that explicitly make the connections to "end extreme poverty, fight inequality and injustice, and fix climate change."

Fairly radical in their aims, the seventeen SDGs include the dignityenhancing, inequality-reducing, and poverty-alleviating goals of eradicating (extreme) poverty and hunger, fostering good health, quality education, gender equality, clean water and sanitation, peace and justice, and reduced inequalities overall. On the sustainability front, SDG goals include increasing renewable energy, sustainable cities and communities, reducing climate change, and fostering healthy life below water and on land. On the societal and economic fronts, the SDGs aim for good jobs and economic growth, responsible consumption (to promote sustainable lifestyles), peace and justice, and a partnership mentality. Indeed, there are obvious overlaps around dignity, equity, and sustainability in these goals since these issues cannot readily be teased apart. Moreover, actors in all three spheres of civil society, government, and business are expected to play roles in helping to meet the SDGs.

AVOIDING A "GLOBAL SUICIDE PACT"

Policy makers, economists, business leaders, and journalists (not to mention the rest of us) focus obsessively on the stock market and other indicators which are geared toward the already well-off. Countries, for their part, obsess about increasing gross national product (GNP), which has been known to be a flawed measure with respect to social wellbeing since its inception. Ecological and social costs associated with these ways of doing business and economics are considered by economists and, importantly, accountants to be externalities, which are not (currently) counted as negatives in important measures such as gross national product (GNP) or company profits. In fact, externalities (or costs incurred to deal with them) typically count as enhancements to economic activity (e.g., when cleanup of pollution is needed) that add to economic "growth."

Such disconnects between the dominant neoliberal economic paradigm and its policies and social justice, human dignity, and sustainability are at the core of Pope Francis's and many others' critiques

⁴United Nations, *Sustainable Development Goals* (https://sustainabledevelopment. un.org/sdgs).

of today's capitalism. The current economic system fosters ever more materiality, consumption, and product churn. Today's economies are dominated by the financial sector, which has vastly multiplied its influence on the economy since the 1980s. The system also fosters rapid technological change with all of its associated material and social costs, and an exaltation of a so-called "free market" that does not actually exist. As Ehrenfeld & Hoffman (2013) and Jackson (2011) have demonstrated, economies—and humans—cannot continue endless consumption (not to mention population growth) on a finite planet, and decreased unsustainability is not the same thing as sustainability. Yet business as usual continues apace.

New Theory of Business

Clearly, new economic and business paradigms are needed in this troublesome context before the world faces what some claim may be global catastrophe (e.g., Lovelock, 2006, 2007, 2009) or others "merely" a great disruption (Gilding, 2011). Moreover, delay in dealing with the sustainability crisis has become both economically and socially costly (IPCC, 2014). The question is, what changes can feasibly be made to the current economic and business system that might result in better outcomes? It is to this question that we now briefly turn as we consider changes that can make a significant difference in the current trajectory.

One shift already occurring is that leading scholars are beginning to articulate new ways for businesses to design purposes in the context of dignity, sustainability, and the inequality crisis. Thomas Donaldson and James Walsh (2015), for example, argue for a new "theory of business" which they claim is lacking. Their theory articulates the purpose, accountability, control, and measures of success of businesses quite differently from the current norms of shareholder wealth maximization and continual growth. Donaldson & Walsh argue clearly that firms should contribute to what they call collective value, stating that:

[a] firm is a human creation, one designed by humans and for humans. At a minimum, all of its activities must clear the Dignity Threshold. No firm should disrespect the inherent worth, the dignity, of its many business participants. It must treat each one with respect. Moreover, no firm should forget that the final justification of its activities from a social perspective lies in its contribution to collective value. (Donaldson & Walsh, 2015: 198)

Donaldson & Walsh call for firms to be accountable to their participants, i.e., those stakeholders without which the firm cannot be successful. In undertaking this new theory of the firm, these authors also argue that firms need to be accountable to current stakeholders—and, just as importantly, to future ones as well. They even give a nod to the planet's other living beings as worthy of the considerations of dignity and good treatment, with the notion that the control of businesses needs to focus on ensuring that there are no dignity violations for any stakeholders.

Need for Business and Economic Paradigms

Businesses today are constantly being told by economists and financiers that they must maximize wealth and profitability as their core purposes, no matter what the social or ecological costs are. The neoliberal agenda strongly emphasizes so-called "free markets," individualism, free trade (globalization), and growth under rubrics, many of which are accepted as gospel, like "maximize shareholder wealth." Things are beginning to shift, however, as new recognition of the power of this narrative rises and alternative ideas are set forth (e.g., Waddock, 2016). For example, legal scholar Lynn Stout (2008, 2012) has rigorously demonstrated that there is actually no mandate that requires companies to "maximize shareholder wealth," despite the fact that managers and sometimes even courts have this misconception.

One important shift is to create a new sense of purpose and set of goals for economic actors like companies, as Donaldson & Walsh (2015) argue. Such purposes need to be underpinned by a new set of memes and business-in-society narratives that moves away from the narrowly focused issue of maximizing shareholder wealth toward a broader, societally-, and ecologically-responsive set of purposes (e.g., Waddock, 2016). A major effort to shift the conversation about the roles, purposes, and functions of businesses is represented by the Humanistic Management Network, which promotes a humanistic approach to economics that encompasses both human dignity and wellbeing (more information is available at www.humanetwork.org). This group, along with others, is developing a new initiative called Leading for Wellbeing which is explicitly aimed at creating a coalition of actors oriented toward changing the business and economic narratives in society for the wellbeing and dignity of all.

Similarly, the Tellus Institute's Great Transition Initiative (http://www.greattransition.org/) aims to develop "concepts, strategies, and visions for a transition to a future of enriched lives, human solidarity, and a resilient biosphere," while the New Economy Coalition (www.neweconomy.net) is focused on "imagining and building a future where people, communities, and ecosystems thrive" by creating change in the economy and politics. Still another effort is that of the

New Economics Foundation of the UK (www.neweconomics.org), which aims to "transform the economy so that it works for people and the planet." These initiatives represent only a few out of possibly millions of attempts, some small and others large, that constitute what ecologist Paul Hawken (2007) has called "blessed unrest" and which aim to make the world more equitable and sustainable at the same time. The key to shifting the existing paradigm, in some respects, is getting these and many other aligned initiatives to work together on creating what stakeholder theorist R. Edward Freeman (University of Virginia) calls a new "story" about business that encompasses dignity, wellbeing, and sustainability (Freeman, Harrison, Wicks, Parmar, & De Colle, 2010), or what Donaldson & Walsh (2015) call collective wellbeing.

New Measures of Success

Key measures of company success in accord with a construct much broader than the financial bottom line are starting to gain traction. Ideas about "wellbeing," much aligned with Donaldson & Walsh's (2015) concept of "optimized Collective Value" subject to clearing the dignity threshold, are embedded in emerging indicators. These new measures include the Genuine Progress Indicator (GPI), whose use is growing, the Human Development Index (HDI), and even the Gross National Happiness (GNH) indicator. All are different ways of assessing a broader array of elements that contribute more to societal wellbeing than does GNP.

To promote acceptance of these measures, policy makers need to understand that not all "wealth" particularly considered as dignity, wellbeing, and sustainability can be measured solely in economic terms. Many company executives already have this understanding because their companies have been issuing triple-bottom-line (people, planet, and profit or, perhaps more current, people, planet, and prosperity), ESG (environmental, sustainability, and governance), or sustainability reports for years. This reporting reality, according to the accounting firm KPMG, is now "de facto law" at least for multinational firms, which are expected to issue such reports. Many ESG reports, for instance, adhere to the guidelines of the Global Reporting Initiative (GRI), the global standard for ESG reporting founded in 1997 which is linked to reporting requirements for the U.N. Global Compact's 12,000 (8,000 business) signatories. GRI itself, however, is also being supplemented by another set of initiatives, including SASB (Sustainability Accounting Standards Board [http://www.sasb.org/]) in the U.S., aimed at helping companies develop material information about their sustainability performance and disclose it to investors.

As learning about reporting so-called "non-financial" results grows, so does interest in the concept of integrated reporting via the global International Integrated Reporting Initiative (<IR> [http://integratedreporting.org/]), which is setting the standards for annual reports that integrate financial and ESG information into a single document. Although integrated reporting is still in its early days, it is already mandated in South Africa while ESG reports are required for listed companies on a number of important stock exchanges. Integrated reporting by all companies is a next logical step and one way to enhance the linkages among dignity, sustainability, and equity at the company level.

Company analysts in the social investment community have also been developing broad indicators of companies' performance in multiple dimensions that affect sustainability, society, and equity/dignity for years to come. For example, company social ratings agencies (like MSCI ESG, Vigeo, and even, to some extent, Moody's, among others) have for years rated companies on social and ecological indicators. These metrics include community relations, environment or sustainability, product quality, supply chain management, and similar measures that detail companies' "social" and responsibility performance, and which are increasingly used by investors to make investment decisions. Other initiatives use customers' ratings, as is done with Good Guide (http://www.goodguide.com/), to highlight and evaluate companies' responsibility performance.

In addition, new company forms like B Corporations (http://www. bcorporation.net/) and social enterprises have in recent years provided ways for companies to design themselves while keeping multiple bottom lines (or ESG performance) explicitly in mind. The explosive growth in such multiple-bottom-line enterprises suggests their attractiveness for many people.

Shifting Purposes for Businesses

The keys to change may lie in providing incentives for changed behaviors, measuring firms and their outputs that encompass critical ESG factors, and broadening our understanding of the nature and purposes of businesses to encompass wellbeing (or, as Donaldson and Walsh would have it, collective value). In a sustainability constrained context, potential shifts include developing and rewarding new (or reinstituting old) business models that focus on developing durable, high quality, upgradable, and reusable products and services with minimal impact. For example, products involving computer software need to be upgraded via software rather than churned via replacements in hardware. As the types of rating systems discussed above continue to evolve, it is likely that companies will increasingly be rated on factors like durability and quality of their products as part of their sustainability agendas.

Shifting Business Practice

Social media, like company ratings, social investment analytics, and "best practice" surveys and rankings, have a role to play in fostering the types of changes needed for companies to become more sustainable, more equitable, and begin treating people with more dignity. As companies like Good Guide and the methods employed by firms like e-Bay to rate sellers and buyers become better known, other imitators are likely to develop platforms where companies' performance along dimensions of sustainability, dignity, and equity can be assessed. In such a social media context, companies that exhibit problematic practices, such as excessive marketing of unneeded, unnecessary, and wasteful goods and services, could readily be called out and made (negative) examples of. Such negative publicity would mean that they would suffer from the implications of such practices rather than be lionized for "growth" at the expense of sustainability and the dignity of both people and the planet's other beings.

Along similar lines, activists have already exposed many of the problems of modern agriculture through videos, books, and other outlets, but much more of this type of activity, responsibly handled, becomes more feasible and likely in a decentralized social media context. Agricultural practices that strip land of organic matter, poison it, and greatly violate the dignity of sentient beings need to be called out for what they are. Pressure from activists, who openly expose problematic practices and highlight their implications, could shift viewpoints. They could also highlight the advantages of changes toward more sustainable, earth-, and people-friendly policies such as organic farming, which, unlike current practices, has been claimed to be able to feed the world's human population while enhancing, instead of depleting, topsoil.

As activists organize and learn to use the resources of social media to effect change, all kinds of problematic practices could be exposed. For example, foodstuffs that lack much real nutritional value while providing excessive salt, fat, and sugar (a description that includes most processed foods [Moss, 2013]) could be made even more visible for what they are. At the same time, sustainable and organic substitutes could be provided at reasonable cost and with multiple benefits as locally raised goods become more popular (and movements like "Slow Food" enhance their impact). Some of these benefits, properly implemented, could produce less ecological impact—shorter transportation routes, smaller farmers using more land- and food-friendly practices, better nutritional quality in food products, provision of decent work locally for many more people since smaller farms are more labor intensive, and reduced use of artificial fertilizers and pesticides (see Pollan, 2006).

Educating consumers about the impacts of substances like fat, sugar, and salt, as well as of food processing in general, is also necessary. New regulations in the U.S. that detail the actual content of such substances in food will be helpful in providing the kind of product transparency that enables educated consumers to make better food choices, as well as enhancing activism against poor practices. Indeed, ecologists suggest that to bring about sustainability—with positive attendant shifts in health (see the recent World Health Organization's warnings about certain meats [Bouvard et al., 2015]), better and more dignified lives for animals raised, and far less pollution—the quantity of meat eaten, along with the number of animals raised for food, needs to be greatly reduced. As such, substitutes for inhumane practices of animal husbandry carried out in many industrialized farms today also need to be found.

The above examples represent only a few ways in which business practice might be rethought in a world where measures of performance are geared toward sustainability, equity, and dignity for all living beings (including nature itself).

Changing Accounting Practice

Integrated reporting for companies, which will shift accounting practice dramatically, is on the horizon. Changes in accounting regulations and practices can thus be helpful in bringing about a transition toward wellbeing, sustainability, and greater equity. Indeed, some accountants have for a number of years already been developing ideas about lifecycle accounting and full cost accounting, both of which incorporate the real cost of producing goods and services. And while changing accounting regulations so that companies must fully cost the products and services they deliver-thereby internalizing what are now externalities—would be difficult, such will become necessary as the sustainability and climate change crises mature. Of course, prices would need to be adjusted accordingly, i.e., raised to include full costs, which would affect the poor more and create some equity issues. The incentives for companies, therefore, would be on what some call "servicization" (White, Stoughton, & Feng, 1999), which means that companies would make money by producing high quality, durable, and upgradable products and then "servicing" them over time, rather than through product churn. Once again, ecological and resource constraints are likely to push this way of doing business forward.

Changing Management Education

One area ripe for change is global management education, which has been implicated in many of the problems facing the planet today, particularly in the spectacular global financial crisis of 2007–2008. Multiple initiatives with the intent of reforming management education have emerged in recent years, including the Principles for Responsible Management Education (PRME, http://www.unprme.org/), the Globally Responsible Leadership Initiative (GLRI, http://www.grli.org/), and the 50+20 initiative (http://50plus20.org/), all of which argue for responsible management education that takes sustainability, equity, social justice, and future wellbeing into account. Indeed, the U.S. business school accrediting agency AACSB (2016) has developed a "collective vision for business education" that advocates for business schools serving as enablers of global prosperity and catalysts for innovation, among other factors.

Of particular relevance to this journal, the annual meeting of the International Association of Jesuit Business Schools, the Colleagues in Jesuit Business Education, and the rest of the world's 200 Jesuit business schools resolved to collaborate on an application to the MacArthur Foundation. This proposal aims to align Jesuit business education more fully with "universally-valued Jesuit educational tenets and with the need for global sustainability, social justice, and poverty alleviation."⁵ The idea is to demonstrate that it is possible to transform the curriculum quickly to address global sustainability, equity, and dignity as urgent crises.

Moving Forward

The list of what needs to be done could go on rather endlessly, and no one single initiative (or paper) can deal with all of them. For example, policies that create inequality, including tax policies that enable the already wealthy to escape paying taxes and corporations to offshore their profits, among other factors, need to be made transparent so that civil society actors can better pressure governments for change. What is clear, however, is that many initiatives are needed to effect change—activism, education, awareness campaigns, pressure on firms and legislatures to

⁵From the discussion on the MacArthur Foundation application at the IAJBS World Forum in Nairobi, Kenya on July 20, 2016.

create policy changes, new business forms, and changes in structural incentives and goals, among others. The reasons these changes are needed, however complex their implementation may be, are quite simple—the combination of sustainability crises, growing inequality, and dignity violations continues to place humanity, not to mention many other creatures, at risk.

CONCLUSION

Transforming the economy wholesale is a daunting task of large system change (Waddell, Waddock, Cornell, Dentoni, McLachlan, & Meszoely, 2015) fraught with complexity and wicked problems (Waddock, Dentoni, Meszoely, & Waddell, 2015). Understanding the complexity of the sweeping changes actually needed suggests moving, as many initiatives are trying to do, in a concerted direction across multiple paths. The current trajectory, however, is equally daunting if its implications are fully understood. Though it is difficult to change this business as usual momentum, U.N. Secretary General Ban Ki-moon, addressing the World Economic Forum in 2011, could not have stated the stakes more clearly:

For most of the last century, economic growth was fueled by what seemed to be a certain truth: the abundance of natural resources. We mined our way to growth. We burned our way to prosperity. We believed in consumption without consequences.

Those days are gone. In the twenty-first century, supplies are running short and the global thermostat is running high. Climate change is also showing us that the old model is more than obsolete. It has rendered it extremely dangerous. Over time, that model is a recipe for national disaster. *It is a global suicide pact*. (Ban, 2011, italics added)

Ban articulated a fundamental question—perhaps *the* fundamental question—facing the planet: "How do we lift people out of poverty while protecting the planet and ecosystems that support economic growth?" Making the necessary transition is far from easy, but the alternative as posted by Ban makes it a clear imperative for all of us.

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LAUDATO SI' AND THE PAPAL VIEW OF ECOLOGICAL DEBT AN EMPIRICAL EXPLORATION¹

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Abstract. In 2015, Pope Francis released his second papal encyclical, Laudato Si': On Care for Our Common Home (Francis, 2015), the central idea of which is the Holy Father's concern for the future of our planet, our common home, and to seek sustainable and integral development. The purpose of this article is to examine critically and empirically the specific notion of ecological debt as described in the encyclical (Francis, 2015: 51 and 52), beginning with a historical background on the origins and use of the term. We then touch upon the Pope's discussion of ecological debt and his indictment of multinational corporations (MNCs) in Laudato Si', which resonate with the so-called pollution haven hypothesis (PHH) which states that pollutionintensive industries in developed countries relocate their "dirty" industries to developing countries with relatively lax environmental regulations. In a similar vein, we propose that a rise in total greenhouse gases is associated with the resource extraction and commodity export-based activities of MNCs in developing countries where such activities and their resultant pollution are subject to less stringent regulations due to imperatives for economic growth. This creates an ecological debt when commodity exports from developing countries to more developed ones come at the cost of the environment in the former. Our article thus connects Laudato Si' with PHH, enabling us to examine empirically the Pope's statement that the "export of raw materials to satisfy markets in the industrialized North has caused harm locally" (Francis, 2015: 51).

Keywords: ecological debt; developing country commodity exports; pollution havens

1. INTRODUCTION

The central idea in *Laudato Si'* is Pope Francis's concern for the future of our planet and his moral appeal to "every person living on [it]" to engage in an inclusive dialog on sustainable and integral development. In paragraph 51, Francis introduces the idea of ecological debt and states that "a true ecological debt" exists between the global North and South. In his view, over-consumption on the part of the global North has led to a disproportionate use of natural resources extracted from the global South, resulting in local environmental damage for the latter. The debt thus arises when raw materials are exported from poor nations (South) to rich nations (North) to satisfy the latter's appetites.

Francis also draws attention to the operations of multinational corporations (MNCs) in poor countries, asserting that such companies

operate in ways that "they would never do at home" (Francis, 2015: 51). He notes that the pollution produced by MNCs in less developed countries (LDCs) results in great human and environmental liabilities such as unemployment, abandoned towns, the depletion of natural reserves, deforestation, and the impoverishment of agriculture and local stock breeding, among others (Francis, 2015: 51). These indictments of the nature of globalization form the foundation of what the Pope defines as "ecological debt"—a phenomenon where the global South continues to fuel the development of the global North at its own peril (Francis, 2015: 52).

In this article, we examine the arguments inherent in paragraph 51 of *Laudato Si'* in an empirical framework. First, we provide a historical perspective on the notion of ecological debt as enunciated in the encyclical. Second, we explore the Pope's indictment of MNCs via an examination of the pollution haven hypothesis (PHH), which suggests that pollution-intensive industries in developed countries relocate their "dirty" operations to developing countries with relatively lax environmental regulations (Dinda, 2004). For our empirical analysis, we will emend the standard arguments of the PHH.

We propose that MNC activities related to natural resource extraction and commodity export production in developing countries are positively associated with pollution as measured by greenhouse gas levels. Furthermore, such activities and resultant pollution are subject to less stringent regulations due to the imperatives of economic growth in these LDCs. In other words, an ecological debt is created when commodity exports from developing countries to more developed ones come at the cost of the environment in the former. Our article thus connects *Laudato Si'* with the PHH, thereby enabling us to examine empirically Francis's statement that the "export of raw materials to satisfy markets in the industrialized North has caused harm locally" (Francis, 2015: 51).

In the second section that follows, we trace the evolution and usage of the term "ecological debt" from the mid-1980s to Francis's references in *Laudato Si'*. Section 3 outlines some issues in the estimation of ecological debt and motivates our empirical analysis. Section 4 discusses the pollution haven hypothesis (PHH) and derives two testable hypotheses that link the export production activities of MNCs to pollution in developing economies. Section 5 details our methodology and Section 6 presents our econometric results. Finally, Section 7 concludes with a discussion of the results, limitations of the study, and future research directions.

2. ECOLOGICAL DEBT: A HISTORICAL PERSPECTIVE

Prior to its reference in *Laudato Si'*, the notion of "ecological debt" was understood and used by grassroots and non-governmental organizations (NGOs) as an activist term that focused on the lack of political power of poor regions and countries. Literature documents the first use of the term at a 1985 World Conference on Women held in Nairobi. As reported by Warlenius et al. (2015), an eco-feminist named Eva Quirstop articulated the concept of ecological debt in the following manner:

The debts we are paying are numerous: ecological debts, caused by the plundering, pollution, and irreversible destruction of our natural resources and making it ever more difficult for women to secure the existential basis for their lives and those of their children. (Warlenius et al., 2015: 8)

The term was subsequently discussed at a 1992 United Nations Conference on Environment and Development held in Rio de Janeiro. Conference participants formulated a so-called Debt Treaty that acknowledged the existence of a planetary ecological debt owing to the actions of the global North in exploiting the resources of the global South. The treaty maintained that developed countries owed a debt to the less developed ones in light of resource over-utilization and resultant environmental damage, and demanded the establishment of a system to quantify the cumulative debt of the developed countries over the course of the last five hundred years.

In 1999, the term "ecological debt" grew in prominence through the activities of an Ecuadorian NGO, Acción Ecológica (AE), which defined ecological debt as "the responsibility that the industrialized countries have for the gradual destruction of the planet caused by their production and consumption patterns" (Paredis, Goeminne, Vanhove, Maes, & Lambrecht, 2008: 6). The following year, AE partnered with Friends of the Earth International (FoEI) to launch a campaign to understand ecological debt. AE and FOEI organized a network of NGOs and founded the Southern People's Ecological Debt Creditors Alliance (SPEDCA), the aim of which was to push for an international recognition of ecological debt.

By 2005, several NGO networks in Latin America and Europe began to adopt the language of ecological debt as their main campaign theme. In 2008, five Latin American countries—Argentina, Bolivia, Ecuador, El Salvador, and Nicaragua—mentioned ecological debt in their public address to the U.N. Commission on Sustainable Development and raised calls for its valuation. In the same year, the Centre for Sustainable Development (CSD) at Ghent University proposed a working definition of ecological debt, defining it as

- 1. the ecological damage caused over time by a country, through its production and consumption patterns, in other countries;
- 2. the ecological damage caused over time by a country, through its production and consumption patterns, in ecosystems beyond its natural jurisdiction; and
- 3. the exploitation or use of ecosystems (and their goods and services) over time by a country at the expense of the equitable rights of other countries to these ecosystems (Paredis et al., 2008: 145).

Francis's direct reference to ecological debt in *Laudato Si'* has since reinvigorated discussion of the term. In paragraph 51, Francis acknowledges a "true ecological debt" between the global North and South that stems from harmful environmental impacts of global trade and the disproportionate use of renewable and non-renewable natural resources by developed countries over long periods of time. The Pope's call for a recognition of ecological debt was also echoed at the Paris climate talks in December 2015, where many developing countries asked for an acknowledgement of ecological debt as well as a climate finance plan to deal with it.²

3. ESTIMATING ECOLOGICAL DEBT

It has always been easier to define rather than operationalize ecological debt. This section summarizes some studies that attempt to estimate it. Paredis et al. (2008) identifies two main methods: the first is an *ecological damage*-based approach that looks at specific indicators of ecological damage such as deforestation and overfishing, and the second is based on an *ecological deficit* approach that employs an ecological footprint framework. This latter estimates the over-usage of a

²French Prime Minister Francois Hollande explicitly acknowledged that "there is an ecological debt that the world needs to pay back to Africa" as he convened a special session focusing on climate finance on the continent. At the talks, Hollande promised to provide €2 billion in sustainable energy investment for the African continent as a move toward debt repayment (https://europeansting.com/2015/12/02/there-is-an-ecological-debt-that-the-world-needs-to-pay-back-to-africa-french-president-francois-hollande-promises-2-bn-euros-from-cop21-in-paris/).

resource relative to locally available capacity. Both approaches have been employed by environmental economists.

Srinivasan et al. (2008) employ an ecological damage lens to estimate ecological debt. Their analysis is based on a Net Present Value (NPV) methodology as they estimate the environmental costs of human activities from 1961 to 2000 across six major categories (climate change, stratospheric ozone depletion, agricultural intensification and expansion, deforestation, overfishing, and mangrove conservation) for poor, middle income, and rich countries. The researchers found that climate change and ozone depletion impacts upon developing countries are significantly driven by middle income and rich countries.

Torras (2003) calculates ecological debt using the ecological deficit approach discussed above. His estimates and assumptions are based on the Living Planet Report (Loh, 2000) and work done by Costanza et al. (1998). He calculates ecological deficits for developed countries and ecological surpluses for less developed countries and assigns monetary values to his estimates (in dollars). He also focuses on total exports from developing countries (LDCs) as these exports represent an ever-increasing transfer of bio-capacity from LDCs to support consumption in developed countries (Torras, 2003).

Paredis et al. (2008) propose an alternate and simpler methodology to estimate carbon (ecological) debt that relies on calculating a country's cumulative carbon emissions over and above a sustainable emission level relative to the country's population. Warlenius et al. (2015) propose an estimate based on the gross accumulated greenhouse gas emissions of a country as compared to a globally sustainable level of total emissions (adjusted for population).

While the above methodologies do provide a helpful framework in which to monetize ecological debt, major data deficiencies hinder them as adequate measures of such. Indeed, several academics have critiqued efforts and related methodologies for quantifying ecological debt. Rice (2009), for instance, notes that there is no consensus or a universal method for calculating ecological debt.

One deficiency of the studies on ecological debt mentioned above is that they ignore the linkages between exports, FDI by MNCs, and total greenhouse gas emissions. Our analysis attempts to address this deficiency by empirically examining ecological debt from the perspective of an (emended) PHH. In resonance with the arguments made in *Laudato Si'*, we propose that the commodity export production undertaken by MNCs in developing countries to satisfy demand in developed countries is positively associated with pollution. In the sections that follow, our analysis will be motivated by reviews of literature relevant to the PHH. We will also rely on the working definition of ecological debt provided by the Centre for Sustainable Development, particularly on the point that ecological debt is the amount of ecological damage caused over time by a country, through its production and consumption patterns, in ecosystems beyond its natural jurisdiction.

4. MNCS AND THE POLLUTION HAVEN HYPOTHESIS (PHH)

A rich vein of empirical literature supports the operations of the PHH (Dinda, 2004), which posits that companies, when faced with stricter environmental regulations or higher costs associated with pollution control at home, simply relocate manufacturing to locations with less stringent regulations or lower costs associated with pollution control. For instance, Eskeland and Harrison (2003) examined the pattern of U.S. foreign investment in Mexico, Venezuela, Morocco, and Côte d'Ivoire and found some evidence to indicate that such investments are skewed toward sectors with high pollution abatement costs. Cole, Elliott, and Okubo (2010) examined industry-level data for Japan and observed, after accounting for geographic immobility of an industry, that pollution haven effects are stronger and more discernible when trade in industries with the greatest environmental costs occurs with developing countries.

Foreign direct investment (FDI) undertaken by MNCs is an important variable related to the PHH. Weak environmental regulation in less developed host countries may attract FDI inflow from profit driven companies that want to avoid costly regulations in their home countries (Jensen, 1996). But while FDI inflows can promote economic growth, they might also have a negative impact on the environment (Xing & Kolstad, 2002; He, 2006), and can also contribute significantly to the host country's industrial output which in turn increases overall pollution (Zarsky, 1999).

That FDI inflows contribute to increased pollution and CO_2 emissions, especially in countries in middle and low stages of development, have been demonstrated by empirical studies (Grimes & Kentor, 2003; Hoffmann, Lee, Ramasamy, & Yeung, 2005). Such findings resonate with the Pope's statement on ecological debt as well as his indictment of MNCs in developing economies, and deserve further attention. In this regard, we propose two testable linkages—one that links FDI by MNCs to commodity exports from developing countries to high income countries, and another that links such commodity exports to greenhouse gas pollution.

4.1. FDI and commodity exports

Clausing (2000) investigates the operations of U.S. MNCs in 29 host (developing) countries from 1977 to 1994 and finds a strong positive influence of FDI on exports. Tang (2015) observes that export-oriented FDI is more sensitive to local environmental regulations than local marketoriented FDI. Liu, Burridge, and Sinclair (2002) and Pacheco-López (2005) provide evidence suggestive of a bi-causality between exports and FDI. However, Dritsaki et al. (2004) document a unidirectional causality from FDI by MNCs to export growth. Similarly, Bhatt (2013) provides empirical evidence supporting a positive association between FDI and export growth for Vietnam. Xuan and Xing (2008) also provide empirical evidence linking FDI as one of the major factors driving the rapid export growth of Vietnam. Liu, Wang, and Wei (2001) studied China's aggregate trade and FDI relationships with individual partner countries. Causality tests reveal that inward FDI undertaken by MNCs was associated with a significant rise in exports to the investing country. Makki and Somwaru (2004) and Mehrara et al. (2010) find a causality in the reverse direction and note that export growth attracts FDI to developing countries.

Rice (2007) tries to measure the impact of resource exports from low and middle income countries to eleven countries in the global North. The study notes that the export of resources from LDCs fuels an overconsumption in developed countries at the expense of the LDCs' ability to utilize their own biocapacity. Such research supports the proposition that FDI promotes exports that fuel the global North's overconsumption, thereby shifting the externality to less developed nations. In fact, an UNCTAD (2011) report states that FDI undertaken by MNCs in developing and less developed countries has resulted mainly in export-oriented primary production which actually has had limited impact on local employment. The report also states that FDI inflows largely target countries rich in natural resources.

This review of the literature leads us to our first hypothesis (H1): *FDI to commodity exporting developing countries is positively associated with commodity exports from such countries to high income countries.*

4.2. Commodity exports and total greenhouse gas emissions

There is empirical evidence that indicates a positive association between exports and the emission of greenhouse gases (GHGs). Grether and Mathys (2013) studied the effect of exports and imports on carbon emissions using data covering 62 countries. Their findings reveal that poor and emerging countries such as Indonesia, China, and Chile exhibit high emission intensities for exports relative to imports while large, rich countries such as the U.S., Germany, and Japan are characterized by lower emission intensities for exports compared to their imports. Anatasia (2015) provides empirical evidence of a unidirectional Granger causality running from exports to CO_2 emissions in the case of Thailand and Malaysia for the period covering 1978–2008.

Weber et al. (2008) studied the impact of exports on Chinese CO, emissions during the period covering 1987-2005. They observed that almost 60% of Chinese exports go to the developed world for their consumption and that almost one-third of Chinese CO, emissions were generated by the production of such goods for export. Li et al. (2014) calculated the CO₂ emissions embodied in the bilateral trade between China and 112 other countries/regions. Their results show that the flows of embodied CO₂ emissions in export trade are highly concentrated, with the United States and Japan accounting for 1/4th and 1/7th of the total CO₂ emissions in export trade, respectively. Shui and Harriss (2006) examined the U.S.-China trade during the period covering 1997-2003 to understand the impact of exports to the U.S. on the CO₂ emissions in China. The results reveal that if the U.S. had produced the same quantity of products domestically rather than importing them from China, the CO₂ emissions in the U.S. would have increased by 3% (1997 and 1998) to 6% (2003) higher than the reported levels. Meanwhile, the CO₂ emissions in China due to the production of exports to the U.S. accounted for 7% (1997) to 14% (2002 and 2003) of China's annual CO₂ emissions.

This leads us to our second hypothesis (H2): *exports by commodity exporting developing countries to high-income countries are positively associated with total GHG emissions.*

In the next section, we discuss our methodology before subjecting our hypotheses to econometric testing.

5. METHODOLOGY

We obtained a list of 52 commodity exporting emerging market and developing economies³ from the International Monetary Fund (IMF) World Economic Outlook report (2015) (see Table 1). To test *H1*, we utilized data from the World Development Indicators Database (World Bank Group, 2015) and examined the association between FDI inflows

³Commodity exporters are emerging market and developing economies for which gross exports of commodities constitute at least 35% of total exports and net exports of commodities constitute at least 5% of exports-plus imports on average, based on the available data for 1960–2014.

and exports for our panel of commodity exporting countries over the period covering 1991–2011.⁴ Missing data, however, restricted our sample to 45 countries.

There is evidence in the literature of endogeneity between FDI and exports. Singh and Jun (1995) suggest that the relationship between exports and FDI may be simultaneous. A Hausman test also indicated endogeneity⁵ between FDI and exports in our sample. To address this issue, we constructed an instrumental variable estimate of FDI⁶ (FDINST) that we used in our test of *H*1.

HEXP = $C(1) + C(2)*FDINST + C(3)*LAG FDINST + C(4)*GFCF_GDP + C(5) LABFRC + error$

Where,

HEXP = Exports to high-income countries as a percentage of GDP.⁷

FDINST = Instrumental variable estimate of FDI

⁶We used the following equation:

 $FDIN = C(1) + C(2)*GDPGR + C(3)*TRADEINT + C(4)*INFLCPI + C(5)*GOVTEXPGDP + \epsilon$

where FDIN represents the inward flow of foreign direct investment to an economy and GDPGR represents the real GDP growth rate. Here we posited that FDI is attracted to economies with higher growth rates. The variable TRADEINT represents trade intensity and is a proxy for trade openness; it has been used in the literature as a proxy for the openness of an economy. We used this as a proxy for trade intensity measured by exports as a percentage of GDP plus imports as a percentage of GDP, and posited that a more "open" economy attracts more FDI. The variable INFLCPI measures the level of inflation in an economy and serves as a proxy for risk. We posited that high inflation reduces the attractiveness of an economy to FDI inflows. Finally, GOVTEXPGDP represents the proportion of government expenditure as a percentage of GDP.

⁷To estimate HEXP, we obtained data on total merchandise exports (MEX) and merchandise exports to high-income countries as a percentage of MEX (MEXPCNT) from the World Development Indicators database. We then obtained GDP data for each economy and calculated HEXP as follows: HEXP = (MEX*MEXPCNT)/GDP.

⁴The year 2011 was the last period for which data was available. Seven countries from our original sample of 52 commodity exporting emerging market and developing economies had to be excluded due to missing data.

⁵The Hausman Test (also called the Hausman specification test) detects endogenous regressors (predictor variables) in a regression model. There is also evidence of Granger bi-causality between FDI and exports as discussed in section 4.

GFCF_GDP = Gross Fixed Capital Formation as a percentage of GDP. We expected this variable to be positively associated with exports to high-income countries, thereby reflecting a higher investment in fixed capacity building and infrastructure.

LABFRC = the logged value of the labor force in a country. LABFRC was expected to be positively associated with exports to high-income countries, thereby reflecting a larger labor pool.

We estimated a fixed-effects regression and used robust standard errors to account for heteroscedasticity and cross-sectional dependence. Consistent with H1, we expected the coefficients C(2) and C(3) to be positive and significant, indicating that exports to high-income countries were impelled by FDI to commodity exporting developing economies.

To test our second hypothesis, *H2*, we obtained data for an initial list of 214 countries over the period covering 1991–2011 which was available from the World Development Indicators Database (World Bank Group, 2015). However, due to missing data, our final sample consisted of 94 countries of which 27 are commodity exporting emerging market and developing economies (see Table 3). We estimated the following fixed-effects regression:

TOTALGRNGSEMPCAP = C(1) + C(2)*GDPPCAP + C(3)*GDPPCAP*COMEX + C(4)*POPDENSE + C(5)*HEXPPCAP + C(6)*(HEXPPCAP)*COMEX + C(7)*CRISIS

+ C(8)*ELECTOILGASCOAL + C(9)*ELECTRENEWNOHYDRO + C(10)*EMPINDUSTRY + C(11)*ENRGYUSEPCAP + C(12)*AGRIVALADD + C(13)*FOREST + error

Where,

TOTALGRNGSEMPCAP = total greenhouse gas emissions per capita.

GDPPCAP = GDP per capita. Research on the environmental Kuznets curve (EKC) suggests a positive association between GDP per capita and greenhouse emissions per capita. We expected this relationship to be significantly more positive for commodity exporting countries (Panayotou, 1993).

COMEX = an indicator variable for a commodity exporting country, equal to "1" for each commodity exporter, "0" otherwise.

POPDENSE = Population density. There is evidence which indicates that greenhouse emissions increase/decrease with population density. Selden and Song (1994) and Patel et al. (1995) claim that an increase in population density might cause increased awareness of environmental impacts, resulting in more pressure to adopt stringent environmental standards and clean technologies. However, emissions may increase with population density if changes in settlement patterns necessitated by population growth result in requiring more transport, resources, goods, and services. Moreover, a higher population density might create demand for energy-intensive services that would not be required in areas with a low population density (Holdren, 1991).

HEXPPCAP = Merchandise exports to high-income countries on a per capita basis. We expected a significantly positive association between total greenhouse gas emissions and merchandise exports to high-income countries. This variable is our proxy for the "Global North" as discussed in *Laudato Si*.

CRISIS = is a dummy variable for the financial crisis in 2008–2009. We expected a decrease in this variable to be associated with a decrease in the level of economic activity.

ELECTOILGASCOAL = percentage of electricity generated by fossil fuels. We expected total greenhouse gas emissions to increase with the increased use of fossil fuels.

ELECTRENEWNOHYDRO = percentage of electricity generated by renewable sources other than hydro-electricity. We expected a decrease in total greenhouse gas emissions associated with this variable.

EMPINDUSTRY = Percentage employed in industry. We expected an increase in total greenhouse gas emissions to be associated with higher levels of industrialization in an economy.

AGRIVALADD = Value-added from agriculture as a percent of GDP. Agricultural activities are relatively less pollution intensive compared to manufacturing, although in keeping with the literature, the coefficient could be positive or negative. However, rising GHGs are also associated with agricultural activities such as livestock rearing, maintaining nitrogenous agricultural soils, and specifically rice production (Russell, 2014).

ENRGYUSEPCAP = Energy used per capita. We expected higher greenhouse gas emissions from economies where the energy use per capita is higher.

FOREST = Percentage of forest land to land area. We expected lower levels of greenhouse gas emissions to be associated with economies with a greater proportion of forested land. This could be for two reasons. First, it is possible that less industrially developed economies emit lower levels of greenhouse gas. Second, forests may serve as sponges that absorb carbon emissions.

Initial descriptive statistics of the variables used in our model to test H2 are presented in Table 4. We compared the key variables for our commodity exporting countries with the rest of the countries in our sample and provided basic univariate statistics. Consistent with H2, we expected the interaction coefficient C(6) to be significantly positive, indicating that exports to high-income countries are incrementally and positively associated with greenhouse gas emissions.

6. RESULTS

Our econometric results for *H1* are displayed in Table 2. Consistent with our expectations and *H1*, we observed that contemporaneous FDI inflows to commodity exporting countries are significantly associated with an increase in exports to high-income countries. Indeed, such resource-seeking FDI inflows seem to impel said exports.

Contrary to our expectations, however, the variable GFCF_GDP was significantly but negatively associated with HEXP. This could be because GFCF_GDP stimulated the domestic economy and "crowded-out" any impact on export-based activities. None of the other variables achieved statistical significance.

Our results for *H2* are displayed in Table 5. We found that the GDPPCAP, ELECTOILGASCOAL, EMPINDUSTRY, ENERGYUSEPCAP, and AGRIVALADD are positively and significantly associated with total greenhouse gas emissions. Thus, economies with higher levels of GDP per capita, fossil fuel consumption, employment in the industry, and energy use per capita emit higher levels of greenhouse gases per capita. Contrary to our expectations, however, FOREST is significantly and positively associated with GHGs. It is possible that this variable is in effect a proxy for the level of activities such as exploration for and discovery of minerals, oil, and natural gas deposits. Greenhouse gas emissions were reduced significantly during the crisis in 2008 and 2009 that saw lowered levels of economic activity.

We observed that coefficient C(5) of the variable HEXPPCAP (per capita exports to high-income countries) is negative and significant, indicating that these exports reduce total greenhouse gas emissions. However, consistent with our expectations and H2, we observed that the coefficient C(6) for the interaction term HEXPPCAP*COMEX that measures the incremental impact of such exports to high-income countries is significantly positive. Unlike the rest of the sample, such exports to high income countries are associated with a significant and positive increase in total greenhouse gas emissions. To test the robustness of our results, we re-ran the regression without the interaction term on just the 27 COMEX countries in this sample.⁸ We observed that the coefficient on the variable HEXPPCAP is significantly positive. In other words, exports from commodity exporting countries to high-income countries are associated with an increase in greenhouse gas emissions. This finding is consistent with the statements made by the Pope in Laudato Si', paragraph 51.

Taken together, our hypotheses validate several points raised in paragraph 51 of *Laudato Si'*, especially when viewed from the perspective of the PHH and the activities of MNCs. Our econometrics establishes a significant association between FDI undertaken by MNCs in developing countries and commodity exports from these countries. Results also indicate that such exports to the global North (high income countries) are significantly associated with higher greenhouse gas emissions. In sum, the Pope's claim that the "export of raw materials to satisfy markets in the industrialized North has caused harm locally" (Francis, 2015: 51) appears to be empirically valid with regard to our sample.

7. DISCUSSION, LIMITATIONS, AND FUTURE RESEARCH DIRECTIONS

In response to evidence of the role of human activities in accelerating climate change through increased carbon emissions, the Pope's encyclical calls for recognition of a global "ecological debt." Francis asserts that exports from poor countries to the industrialized North are associated with significant harm to the local environments of the former. Our results demonstrate that this assertion is empirically valid for our sample of commodity exporting developing countries.

The Pope argues that rich countries should help pay this debt by reducing their emissions and by actively helping poor countries put into

⁸Since the results were qualitatively similar, we did not tabulate them.

place policies and programs that support sustainable development. An alternative policy recommendation stemming from our analysis would also suggest carbon taxation as a viable option for commodity exporters looking to reduce carbon emissions. This might incentivize MNCs to consider carbon mitigation strategies as they engage in commodity extraction from developing countries. Finally, stricter regulation of the environment and enforcement of environmental laws in these developing countries are also called for.

In the end, our empirical analysis does in no way imply that commodity exporting developing countries should cut GHGs at the expense of their economic growth. Rather, we suggest that these countries look at sustainable development models that enable them to meet the needs of the present without compromising the needs of future generations. The U.N.'s 17 Sustainable Development Goals (SDGs) offer a blueprint for action in this regard (United Nations, 2015); these goals prioritize areas such as climate change, sustainable production and consumption, and social justice, among others.

It should be noted, however, that the concept of ecological debt is complex, and that this article is an initial attempt to examine one aspect of its manifestation, namely in the form of commodity exports from the global South. But the ecological debt that the North owes to the South cannot be estimated simply by a panel data set covering a certain period; any comprehensive study of this issue must include recognition of such debt as having accumulated over a historical range. Moreover, such a study may be complicated by the fact that it would have to consider colonial histories of exploitation and weak institutions in commodity exporting countries that ignore environmental damage, institutions that may have chosen to emphasize growth over environmental regulation. Also, any estimation of ecological debt should normalize carbon emissions in commodity exporting economies to their level of development and the level of pollution emitted by domestic producers.

Our study is also limited by insufficient data on commodity exporters. We also would have liked to disaggregate FDI flows by industry and by country to get a clearer picture, but such data are simply not available. Furthermore, we are unable to discern whether GHGs in our sample of commodity exporters would have persisted even if there was no FDI by MNCs. Are domestic producers cleaner than foreign MNCs? This question and others like it are beyond the scope of the present study, though they can represent an area of future research.

Issues inherent in the financing of green growth imperatives are also suggesting other areas of future research. For instance, can developing economies sustain their economic growth to alleviate poverty while maintaining a low carbon intensity economy? How can business, government, and the civil sector work collaboratively to address these global issues? In this context, many economists have pushed government efforts to put a price on carbon pollution, either with a tax or a cap-andtrade program in which governments charge a fee to carbon polluters and where industry and market players can buy and sell carbon credits among themselves. Future research can focus on these policies and their impact on economic growth.

Country	Country	
Algeria	Kazakhstan	
Angola	Kuwait	
Argentina	Libya	
Azerbaijan	Malaysia	
Bahrain	Mauritania	
Bolivia	Mongolia	
Brazil	Mozambique	
Brunei Darussalam	Myanmar	
Cameroon	Nicaragua	
Chad	Niger	
Chile	Nigeria	
Colombia	Oman	
Congo, Rep.	Papua New Guinea	
Costa Rica	Paraguay	
Cote d'Ivoire	Peru	
Ecuador	Qatar	
Gabon	Russian Federation	
Ghana	South Sudan	
Guatemala	Syrian Arab Republic	
Guinea	Tajikistan	
Guyana	Trinidad and Tobago	
Honduras	Turkmenistan	
Indonesia	United Arab Emirates	
Iran, Islamic Rep.	Uruguay	
Saudi Arabia	Venezuela, RB	
	Yemen, Rep.	
	Zambia	

Table 1: List of Commodity Exporting Emerging Market and Developing Economies(IMF, 2015)

Dependent Variable: HEXP		
Sample: 1991–2011		
Cross-sections included: 45		
Total panel (unbalanced) observations: 717		
Variable	Coefficient	Signif.
С	2.101176	
FDINST	2.249685	***
LAGGED FDINST	0.455195	
GFCF_GDP	-0.195415	**
LABFRC	1.1284	
R-squared	0.868109	
F-statistic	89.59636	***
Total panel (unbalanced) observations	717	

*** = Significant at p < 0.01 level

**= Significant at p < 0.05 level

* = Significant at p < 0.10 level

Table 2: Association between Exports to High-Income Countries and FDI to Commodity Exporting Countries

Commodity Exporting (27)	Other Countries	Other Countries
Algeria	Albania	Cambodia
Argentina	Armenia	Korea, Rep.
Azerbaijan	Australia	Sri Lanka
Bolivia	Austria	Lithuania
Brazil	Belgium	Luxembourg
Chile	Bulgaria	Latvia
Colombia	Bosnia and Herzegovina	Moldova
Costa Rica	Belarus	Mexico
Ecuador	Canada	Macedonia, FYR

Commodity Exporting (27)	Other Countries	Other Countries	
Guatemala	Switzerland	Malta	
Honduras	China	Netherlands	
Indonesia	Cuba	Norway	
Iran, Islamic Rep.	Cyprus	New Zealand	
Kazakhstan	Czech Republic	Pakistan	
Malaysia	Germany	Panama	
Mongolia	Denmark	Philippines	
Nicaragua	Dominican Republic	Poland	
Paraguay	Egypt, Arab Rep.	Portugal	
Peru	Spain	Romania	
Russian Federation	Estonia	Singapore	
Saudi Arabia	Ethiopia	El Salvador	
Syrian Arab Republic	Finland	Slovak Republic	
Trinidad and Tobago	France	Slovenia	
United Arab Emirates	United Kingdom	Sweden	
Uruguay	Georgia	Thailand	
Venezuela, RB	Greece	Tunisia	
Yemen, Rep.	Croatia	Turkey	
	Hungary	Ukraine	
	Ireland	United States	
	Iceland	Uzbekistan	
	Italy	Vietnam	
	Jordan	South Africa	
	Japan	Morocco	
	Kyrgyz Republic		

Table 3: List of 94 Sample Countries Used to Test H2

	Other (67 Countries)	Comex (27 Countries)	Country- Years	Signif.
Variables	Mean	Mean		
Value Added from Agriculture (% of GDP)	10.92	11.99	2457	**
Labor Force	24141499	15370395	2139	***
Electricity Generated from Fossil Fuels (% of Total)	58.99	57.99	2597	
Employment in Industry (% of Total)	25.95	22.95	2070	***
Exports (% of GDP)	42.12	33.45	2632	***
Exports to High Income Countries (% of GDP)	21.69	18.12	2598	***
FDI Inflows (% of GDP)	3.53	3.03	2516	**
Forest Area (% of Total Area)	28.5	31.46	2005	***
Real GDP Growth Rate	3.12	3.51	2715	*
GDP Per Capita (\$)	15807	5096	2728	***
Exports to High Income Countries per capita	390693	108786	2650	***
Total Greenhouse Gas Emissions (kt of CO_2 equivalent per capita)	10.25	10.12	2790	
Ores and Metals Exports (% of merchandise exports)	5.24	9.41	2385	***
Agricultural Raw Materials Exports (% of merchandise exports)	3.25	5.05	2383	***

*** = Significant at p < 0.01 level ** = Significant at p < 0.05 level * = Significant at p < 0.10 level

Table 4: Descriptive Statistics for Key Variables

Dependent Variable: TOTALGRNGSEMPCAP		
Sample: 1991–2011		
Cross-sections included: 94		
Total panel (unbalanced) observations: 1428		
Variable	Coefficient	Prob.
С	-7.304456	***
GDPPCAP	0.000147	**
GDPPCAP*COMEX	-0.000399	
POPDENSE	-0.000182	
HEXPPCAP	-1.41E-06	***
(HEXPPCAP)*COMEX	7.84E-06	***
CRISIS	-0.40442	**
ELECTOILGASCOAL	0.03078	***
ELECTRENEWNOHYDRO	-0.032003	
EMPINDUSTRY	0.0793	**
ENRGYUSEPCAP	0.002135	***
AGRIVALADD	0.062751	**
FOREST	0.184068	***
R-squared	0.937359	
F-statistic	186.4837	***

*** = Significant at p < 0.01 level ** = Significant at p < 0.05 level * = Significant at p < 0.10 level

Table 5: Association between Exports and Total Greenhouse Gas Emissions per Capita for Sample Countries

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THE PAPAL ENCYCLICAL LAUDATO SI' A FOCUS ON SUSTAINABILITY ATTENTIVE TO THE POOR

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Abstract. This article seeks to reflect upon *Laudato Si'*, the papal encyclical on ecology and sustainable development, and uncover its apparent philosophical and practical approach to the environment. It begins with a discussion of paradigms of thought that outline the new ecological paradigm (NEP) suggested in the ecological literature, thereby helping to situate the ecosophy of *Laudato Si'* within current thought. As we will show, *Laudato Si'* differs from the NEP by linking the poor to our approach to sustainability and in its consideration of integral ecology. Specific principles for sustainability in business are then identified and strategic approaches are recommended, as are guidelines for an eco-justice approach to business and business education.

Keywords: sustainability; *Laudato Si*'; ecosophy; New Ecological Paradigm; Western Dominant Social Paradigm; poverty; Roman Catholic Social Teaching; integrative justice model

INTRODUCTION

Laudato Si' (hereafter referred to as LS), the papal encyclical on the environment released in June 2015, has been recognized "as one of the most significant events in the modern environmental movement" by the *Financial Times* (Linden, 2015) and is something that *The Guardian* claimed "the world should pay attention [to]" (Guardian, 2015). It has also gained criticism, however, from free market conservatives due to its attack on capitalism, and from those who do not believe in climate change (Yardley & Goodstein, 2015). Linking the consumerism of developed nations and the drive of capitalistic economic growth with the demise of the environment and the poor, Pope Francis (2015) questions the belief that technology and economic growth are the answers to poverty and environmental degradation. LS thus follows integral ecology, where care for the environment is linked to a morally good and "just" type of economic development that seeks to provide freedom, education, and meaningful work to all.

Current sustainability-focused business practices, however, tend to emphasize implementing sustainability to increase consumption of sustainable products and create efficiencies with sustainable operations for the purposes of economic growth. Much of this behavior is justified by the growth imperative that underlies the current Dominant Social Paradigm (DSP) of the West. Unfortunately, according to Prothero, McDonagh, and Dobscha (2010), this way of thinking is flawed and does little to further global sustainability goals. As such, there have been calls for a shift to an eco-centric and holistic view in the New Ecological Paradigm (NEP) to help realize truly sustainable objectives (Kilbourne & Polonsky, 2005).

Not surprisingly, environmentally-based normative guidelines and many studies on sustainability are entrenched in the DSP at present. The Organisation for Economic Co-operation and Development (OECD) and the United Nations Global Compact guidelines for MNCs espouse a precautionary approach, emphasizing more environmentally friendly operations and products to enable better resource productivity and economic growth (OECD, 2011; UN Global Compact, 2015). To enable future resource use and sustained societies, the Caux Roundtable principles go further in terms of respect for the environment to achieve business goals (Caux Roundtable, 2010). The CERES principles, the most thorough regarding sustainability, recognize that companies are changing too slowly in their sustainability behavior (Moffat, 2010) and are founded on economic growth as a goal (Blood, 2010).

Unfortunately, such a belief in unending economic growth is no longer viable given the ecological limits that have been acknowledged over the past few decades. Support for the current DSP, which is the basis for the guidelines outlined above, has led to the acceptance of behaviors that cause environmental degradation and a lack of support for policies needed to protect the environment (Pirages, 1977). Environmentalism has been reduced to policy issues and fixes instead of exploring the causes of such issues (Rodman, 1980). Concepts such as reduce, reuse, recycle, and regulate, along with the notion of eco-efficiency, remain grounded in an anthropocentric viewpoint (McDonough & Braungart, 2002) which pursues competitive advantage rather than preservation of the environment. Such an anthropocentric view of the world means that real change in environmental behaviors has not occurred even with a heightened concern about the environment (Kilbourne, 2010). Environmental focus and change in organizational practices cannot happen, then, while organizations base their processes on value creation and exchange, and while consumers value goods acquisition as a route to happiness and wellbeing (Wang & Wallendorf, 2006) which in itself is impossible (Haller & Hadler, 2006).

In contrast with the DSP's position, LS offers a perspective that is theocentric and humanity affirming, where human persons play an important role in the continuation of creation via stewardship and care for the earth rather than via dominion or exploitation. This position also departs from the NEP's ecological holism that explicitly rejects a human focus and that, in fact, could be amoral to the concerns of the poor. Instead, LS focuses on an approach to sustainability that is particularly cognizant of the poor and disadvantaged (Martin, 2015). Such a perspective, often lacking in other discourses about sustainability, is the core of LS's distinct value proposition.

This article will thus analyze the NEP and LS to deduce not only points of overlap between these two paradigms but also points of departure, particularly regarding the core assumptions of the NEP. As has been done with previous encyclicals such as *Centesimus Annus* (Abela, 2001) and *Caritas in Veritate* (Yuengert, 2011; Vaccaro & Sison, 2011; Klein & Laczniak, 2013) as well as with the pastoral letters of the Roman Catholic Bishops (Curran, 1988), we will then list some of the implications that LS has for the poor and provide policy implications for business as well as suggestions for business school educators.

ECOLOGICAL WORLDVIEWS

An ecological worldview is the "cognitive and perceptual capacity to see the world through the lens of ecology, which is essentially the relationship between species and their environment ... [and] our interdependence" (Schein, 2015). Such paradigms are so inherent that they shape behaviors and decisions without being explicitly acknowledged. However, concern about the unquestioning acceptance of a dominant social paradigm may occur when we consider that the paradigm also shapes our evaluations of effectiveness and approaches to research (Kuhn, 1962), as well as our view of what constitutes worthy approaches to knowledge discovery and even of what is worthy knowledge in the first place (Buttle, 1994).

There have thus been calls to change the approach to sustainability research and marketing given that current studies under the Western DSP have not amounted to substantial change. A complete paradigm shift, however, is needed for such a transformation to occur (Kilbourne, 2010). On that note, there is much support for a shift to the New Environmental/Ecological Paradigm (NEP) (Kilbourne & Polonsky, 2005; Stern, Dietz, & Guagnano, 1995) which has eco-centrism as its core instead of anthropocentrism. Based on the work of Dunlap and Van Liere (1978), this paradigm contrasts greatly with the DSP.

What follows is an explanation of the basic philosophical basis of the NEP. The terms NEP and DSP will be used throughout as opposed to "economism" or "ecosophy" or any other terms. This is because each paradigm encompasses much more than what the concepts of economism or ecosophy do, as will be seen in the following sections.

THE NEW ECOLOGICAL PARADIGM

The New Ecological Paradigm (NEP) is first and foremost based on eco-centrism, a view that sees nature as having inherent value beyond its usefulness to human persons (Dobson, 1990; Purser, Park, & Montuori, 1995; Schein, 2015). Eco-centrism emphasizes a belief in holism rather than in atomism, thereby helping the eco-centrist to understand that human persons are part of a larger whole and are thus limited in what they can do. For instance, ecosystems are acknowledged to have systemic import (Rolston, 1994) to not only produce value but support life in general. Human persons, therefore, are a part of that system rather than above it and controlling it. It is a line of thought that brings about differences in priorities and decision-making. Holism thus speaks for the belief that human persons are just one part of an interrelated web of life. They are not at the center as the main focal point, for each strand of that web needs to work in equilibrium with the others (Luckett, 2004). Therefore, while nature should be used to ensure that human persons survive, it should not be destroyed nor largely interfered with (Gladwin, Kennelly, & Krause, 1995). A spirit of cooperation is espoused as the functional approach for such equilibrium to be maintained, one in which organizations, regulators, and individuals must work together for larger systemic goals (Ketola, 2008).

Nature, then, is vulnerable, and technology needs to have minimal impact on it. Natural resources, for instance, must be used sparingly, for technology can never replace them. In fact, a truly humane technology would put the needs of people first and enable human relationships, belongingness, and self-actualisation (Robertson, 1983). With such a relationship orientation, it would seek a steady state economy and encourage sustainable growth aimed at equilibrium (Schumacher, 1973). There are multiple views of what political philosophy will work in this regard (see Eckersley, 1992), although there is some agreement on decentralized and local political arrangements (Robertson, 1983; Eckersley, 1992; Saward, Dobson, MacGregor, & Torgerson, 2009). In such cases, "capital must be rooted in community, and trade must be restricted to the exchange of true ecological surpluses. Small scale community-based economies defined by natural regional boundaries ... are [thus] most appropriate" (Gladwin et al., 1995: 888).

The core philosophy behind the NEP comes from Arne Naess, a Norwegian philosopher who states in his seminal work that such ecological harmony or equilibrium is a necessary precursor to scientific pursuits such as ecology (Naess, 1973) in that normative, prescriptive, and descriptive components can be drawn from it and be used for understanding and developing the future. His view of deep ecology is one of internal relatedness, that not only is there an intrinsic relationship between things but that those things would not be as they were without it.

Eckersley (1992) develops this position, stating that we are all interrelated and made up from (or of) those interrelationships in a dynamic web of creation where a series of events and interactions rather than independent things creates, maintains, and lives in the world (Birch & Cobb, 1981). In contrast to anthropocentrism, this ecosophy does not provide a vivid dividing line between beings and considers human persons and non-human creatures as equals. It also points to *biospherical egalitarianism*, a view where each aspect of the ecosystem has an equal right to live and thrive at least "in principle," for realistically there is a need for "some killing, exploitation, and suppression" (Birch & Cobb, 1981: 95) to (presumably) ensure human survival.

There are five main assumptions one must hold to follow such a paradigm (Dunlap & Van Liere, 1978; Dunlap, Van Liere, Mertig, & Jones, 2000; Hawcroft & Milfont, 2010). Recognition of the ecological, human, psychological, and even conceptual limits of growth is the *first* assumption. The *second* is a belief in the fragility of the balance of nature and the power of human persons to upset that balance. It is important to accept that such a balance needs to be maintained, and that there are not only physical limits for space and resources but also social limits for industrial growth due to its inherent social costs (Robertson, 1983).

A rejection of anthropocentrism, the view that nature exists primarily for human use, rounds out the *third* assumption necessary for one to maintain the NEP. The *fourth* assumption is a rejection of the idea that human persons are exempt from the global consequences of their behavior, and believes instead that human persons are a part of nature and so are constrained by, and responsible for, its limits (Borland & Lindgreen, 2013). This follows on from the third assumption, for anthropocentrism holds that human persons are exempt from nature's constraints since they are masters over nature. Lastly, the *fifth* assumption, outlined by Dunlap and Van Liere (1978), is a belief in and acceptance of an eco-crisis rather than a blinkered approach.

It has been found that people who hold to these assumptions not only have a higher level of belief in the NEP and an eco-centric worldview. They are also more likely to support environmental regulations and funding as well as personally try to preserve the environment (Hawcroft & Milfont, 2010; Schein, 2015).

These assumptions contrast greatly with the four base assumptions that lead to the current Western DSP, which are: 1) that human persons are independent and inherently different from nature, and so are dominant over it; 2) that they are in control of their own futures; 3) that the world has unlimited potential for creating opportunities for human persons; and 4) that human progress can be maintained by human ingenuity, often in the form of technology (Catton & Dunlap, 1980). Therefore, since the assumptions of the DSP do not support the development of a more sustainable future, it is only appropriate that we compare *Laudato Si'* with the assumptions of the NEP rather than the DSP.

LAUDATO SI' AND THE NEP ASSUMPTIONS

The recent encyclical of Francis, *Laudato Si'* (which literally means "Praise be to you," a phrase taken from St. Francis of Assisi's *Canticle of the Creatures*), is divided into six chapters and 246 paragraphs. It builds on the tradition of the Church's social teaching (n. 15) and incorporates many of the concepts of Roman Catholic social thought, such as human dignity, solidarity, stewardship, the common good, and the preferential option for the poor. Several main themes that flow through the encyclical (mentioned at n. 16) are the following:

- the intimate relationship between the poor and the fragility of the planet;
- the conviction that everything in the world is connected;
- the critique of new paradigms and forms of power derived from technology;
- the call to seek other ways of understanding the economy and progress;
- the value proper to each creature;
- the human meaning of ecology;
- the need for forthright and honest debate;
- the serious responsibility of international and local policy; and
- the throwaway culture and the proposal of a new lifestyle.

It should be noted that the basis of the Church's ecological teachings begins with Genesis, particularly in the propositions that nature is "good" and that we have a duty to care for it as stewards and have dominion over it (New Mexico Bishops, 1998). However, as Pope John Paul II (1987) points out in *Sollicitudo Rei Socialis*, this dominion has moral limitations and is not absolute. In a reflection of the web of which we are part, St. Francis of Assisi, the patron of ecology, wrote on the care and love we must show to nature and the poor (John Paul II, 1990). Such teachings are described and expanded upon in encyclicals such as *Rerum Novarum* (Leo XIII, 1891), *Mater et Magistra* (John XXIII, 1961), *Pacem in Terris* (John XXIII, 1963), and *Populorum Progressio* (Paul VI, 1967). Subsequent teaching from John Paul II onwards and from groups of bishops would then develop a rich body of Roman Catholic social thought on the environment which LS will eventually draw upon. In the following sections, we will discuss some of the teachings of LS while considering the assumptions of NEP.

NEP Assumption 1: Ecological, human, psychological, and conceptual limits of growth

Roman Catholic Social Teaching (CST) cautions against a reductionist view of nature where one holds "that an infinite quantity of energy and resources are available, that it is possible to renew them quickly, and that the negative effects of the exploitation of the natural order can be easily absorbed" (Pontifical Council for Justice and Peace, 2004: n. 462). According to CST, "a correct understanding of the environment prevents the utilitarian reduction of nature to a mere object to be manipulated and exploited" (Pontifical Council for Justice and Peace, 2004: n. 463).

John Paul II, in his encyclical *Laborem Exercens*, was the first to state the limitations of nature back when its abundance was always being cited. He wrote about "the growing realization that the heritage of nature is limited and that it is being intolerably polluted..." (1981: n. 353), and reiterated the same in *Sollicitudo Rei Socialis* (John Paul II, 1987: n. 411) with statements on the limits of resources. In that encyclical, he also discussed the boundaries of consumption where "super development, which consists in an excessive availability of every kind of material goods ... makes people slaves of 'possession' and of immediate gratification..." and states that resources are limited, that some are nonrenewable, and that this is of concern for future generations of human persons (John Paul II, 1987: n. 412).

The assumption of limits to growth is also explicitly stated in LS:

We all know that it is not possible to sustain the present level of consumption in developed countries and wealthier sectors of society, where the habit of wasting and discarding has reached unprecedented levels. The exploitation of the planet has already exceeded acceptable limits and we still have not solved the problem of poverty. (n. 27)

Yet, even then, "many people will deny doing anything wrong because distractions constantly dull our consciousness of just how limited and finite our world really is" (LS, n. 56). Francis thus cautions against the technocratic paradigm that we appear to have adopted where we subscribe to the idea of infinite or unlimited growth: "It is based on the lie that there is an infinite supply of the earth's goods…" (LS, n. 106). Such a paradigm assumes that the negative effects of the exploitation of nature can be easily absorbed. We need to focus, therefore, on "eliminating

the structural causes of the dysfunctions of the world economy and correcting models of growth which have proved incapable of ensuring respect for the environment" (LS, n. 6). Industrial development and a particular growth model, for instance, were highlighted in previous CST as causing environmental and public health degradation due to pollution (John Paul II, 1987: n. 418).

NEP Assumption 2: Fragility of the balance of nature and human capacity to upset that balance

Sollicitudo Rei Socialis recognizes that ecosystems are fragile, interconnected, and must be preserved (John Paul II, 1987: n. 411). The encyclical discusses the "greater realization of the limits of available resources, and of the need to respect the integrity and the cycles of nature and to take them into account when planning for development...." John Paul II thus advocates a holistic approach to the environment that considers all impacts of human behavior to protect nature for future generations: "On another level, delicate ecological balances are upset by the uncontrolled destruction of animal and plant life or by a reckless exploitation of natural resources..." (1990: n. 7).

Therefore, while CST acknowledges the positive roles that science and technology play in human development, it also recognizes that some discoveries, particularly in the fields of industry and agriculture, have produced harmful long-term effects (Pontifical Council for Justice and Peace, 2004: n. 459), and that "the conquest and exploitation of resources has become predominant and invasive" (n. 461). Francis thus highlights the need for balance while recognizing the human ability to create imbalance: "The impact of present imbalances is also seen in the premature death of many of the poor..." (LS, n. 48), and "the degree of human intervention, often in the service of business interests and consumerism, is making our earth less rich and beautiful, ever more limited and grey..." (n. 34).

LS also states that "although change is part of the working of complex systems, the speed with which human activity has developed contrasts with the naturally slow pace of biological evolution" (n. 18). The encyclical points out in numerous places how human persons have contributed to ecological degradation. Francis thus reminds us of the ecological concerns raised by previous popes: John XXIII (n. 3), Paul VI (n. 4), John Paul II (n. 5), and Benedict XVI (n. 6). Each of them had warned against our irresponsible use of the environment and about the ecological damage resulting from it.

We are thus reminded that "if we acknowledge the value and the fragility of nature and, at the same time, our God-given abilities, we can finally leave behind the modern *myth of unlimited material progress*" (LS, n. 78, emphasis added). The assumption that we can dump or release any amount of waste into the oceans or toxic gases into the air with no adverse effect on the environment is a mistaken one. Like in the NEP, LS emphasizes that the balance of nature is fragile, and not only do we have the capacity and power to upset that balance, but the damage that we have already inflicted upon nature places on us a moral obligation to devise "intelligent ways of directing, developing and limiting our power" (n. 78).

NEP Assumption 3: Rejection of the anthropocentric view that nature exists primarily for human use

While CST upholds the prominent place of human persons in creation, it cautions against an arbitrary use of the earth as if human persons own it. When people behave in such a manner, they set themselves up in the place of God and end up "provoking a rebellion on the part of nature" (John Paul II, 1991: n. 37; Pontifical Council for Justice and Peace, 2004: n. 460). Instead, human persons are meant to be co-operators with God in the continuous work of creation.

Sollicitudo Rei Socialis states that one may not use nature for economic benefit only but must "take into account the nature of each being and its mutual connection in an ordered system, which is precisely the 'cosmos'" (n. 418). Thus, while dominion over nature exists, absolute dominion does not:

the dominion granted to man by the Creator is not an absolute power, nor can one speak of a freedom to "use and misuse," or to dispose of things as one pleases.... [When] it comes to the natural world, we are subject not only to biological laws but also to moral ones, which cannot be violated with impunity. (n. 418)

In LS, a whole chapter is devoted to a reflection on an anthropocentric view of the world: "We have come to see ourselves as lords and masters, entitled to plunder at will" (n. 2), "to see no other meaning in their natural environment than what serves for immediate use and consumption" (n. 5). In the end, we are reminded that it "is not enough, however, to think of different species merely as potential 'resources' to be exploited, while overlooking the fact that they have value in themselves" (n. 33).

Francis thus echoes Benedict XVI's position that creation is harmed when we mistakenly think that everything is our property and to be used for ourselves alone (cf. LS, n. 6). He tries to correct an erroneous interpretation of Genesis 1:28 where the human person is granted "dominion" over the earth, pointing out that dominion does not justify absolute domination over other creatures but instead implies a relationship of mutual responsibility (n. 67). He states that "the Bible has *no place for a tyrannical anthropocentrism* unconcerned for other creatures" (n. 68, emphasis added). Instead, we are invited to recognize the intrinsic value of the rest of creation, particularly of other living beings (n. 69), and to understand "dominion" more properly as "responsible stewardship" (n. 116).

LS, therefore, does not reject anthropocentrism as much as it rejects a tyrannical version of it, one that mistakenly considers human persons as owners of the earth and having the liberty to exploit it at will. However, this "is not to put all living beings on the same level nor to deprive human beings of their unique worth and the tremendous responsibility it entails" (n. 90), for while LS aligns with the thinking of the NEP regarding the systemic and intrinsic value of ecosystems (of which human persons are a part), it affirms the supremacy of the human person over the rest of creation: "Christian thought sees human beings as possessing a particular dignity above other creatures" (n. 119). Thus, in contrast to NEP which upholds the equality of all things (living and non-living), LS subscribes to a hierarchical system where living beings (with the human person at the top) have a higher standing or status over non-living ones.

NEP Assumption 4: Rejection of human exemptionalism

According to Lannan (1999: 366), "the most basic principle of humanity's relationship to the environment is that humanity is part of creation." CST, however, recognizes that human persons are not just a part of creation but that they have a special role to play in terms of caring for it. This of course does not make them exempt from the constraints and limitations of creation; instead, it imbues them with a special responsibility as stewards. Such a rejection of exemptionalism was first mentioned in *Octogesima Adveniens* (Paul VI, 1971: n. 273) and is advocated as well in *Sollicitudo Rei Socialis* in "that one cannot use with impunity the different categories of beings, whether living or inanimate—animals, plants, the natural elements—simply as one wishes, according to one's own economic needs" (John Paul II, 1987: n. 418). This is because we have a moral obligation to care for nature and one another, thereby requiring that subsidiarity be applied in this respect (John Paul II, 1990). LS laments our irresponsible use and abuse of the goods of the earth when we think that we are its "lords and masters, entitled to plunder her at will" (n. 2). Moreover, "the deterioration of nature is closely connected to the culture which shapes human coexistence. Pope Benedict asked us to recognize that the natural environment has been gravely damaged by our irresponsible behavior. The social environment has also suffered damage" (n. 6). Francis reminds us that "we have forgotten that we ourselves are dust of the earth (cf. Gen. 2:7); [that] our very bodies are made up of her elements, [that] we breathe her air and [that] we receive life and refreshment from her waters" (n. 2). He adds that "nature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it" (n. 139). "Once the human being declares independence from reality and behaves with absolute dominion, the very foundations of our life begin to crumble" (n. 117).

LS, however, goes beyond the NEP assumption that human persons are not exempt from the constraints of nature and holds that we are intricately connected with nature and that we affect it by our actions (like NEP Assumption No. 2) in both positive and negative ways. In keeping with "responsible stewardship" and our special role as cocreators (vis-à-vis NEP Assumption No. 3), LS advocates proactively seeking ways in which "human beings, endowed with intelligence and love, and drawn by the fullness of Christ, are called to lead all creatures back to their Creator" (n. 83). Examples of such positive interventions mentioned in the encyclical are cleaning up polluted rivers, restoring native woodlands, and the production of non-polluting energy, among others (cf. n. 58).

NEP Assumption 5: Belief in and acceptance of an eco-crisis rather than a blinkered approach

The first acknowledgement of an eco-crisis in CST was from *Octogesima Adveniens* (Paul VI, 1971); before that point, the abundance of the environment was just assumed. The encyclical clearly stated that a

transformation is making itself felt, one which is the dramatic and unexpected consequence of human activity. Man is suddenly becoming aware that by an ill-considered exploitation of nature he risks destroying it and becoming in his turn the victim of this degradation. Not only is the material environment becoming a permanent menace—pollution and refuse, new illness and absolute destructive capacity—but the human framework is no longer under man's control, thus creating an environment for tomorrow which may well be intolerable. (n. 273) Throughout LS, there is direct mention of the idea of an "environmental crisis." One example of this can be seen in the following: "Due to an ill-considered exploitation of nature, humanity runs the risk of destroying it and becoming in turn a victim of this degradation ... [of an] ecological catastrophe under the effective explosion of industrial civilization" (n. 4). LS thus cautions against "the rise of a false or superficial ecology which bolsters complacency and a cheerful recklessness" (n. 59) in which people tend to think that the environmental situation is not that serious and that the planet can continue as it is for some time. This perspective grants people who subscribe to it the license to continue with their unsustainable lifestyles:

Regrettably, many efforts to seek concrete solutions to the environmental crisis have proved ineffective, not only because of powerful opposition but also because of a more general lack of interest. Obstructionist attitudes, even on the part of believers, can range from denial of the problem to indifference, nonchalant resignation or blind confidence in technical solutions. (n. 14)

More than just believing in and accepting the ecological crisis, LS also links it with a social and ethical one. For instance, it states that "environmental deterioration and human and ethical degradation are closely linked" (n. 56), and that "the human environment and the natural environment deteriorate together; [meaning] we cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation" (n. 48).

THE DISTINCTIVE VALUE PROPOSITION OF LAUDATO SI'

While LS might agree with most of the assumptions of the NEP, there are some (particularly nos. 3 and 4) which the encyclical either differs in perspective from or takes a little further. For instance, a differentiating point between LS and the NEP is on the notion of creation—while LS resonates with the NEP in acknowledging the intrinsic (and not instrumental) value of nature, it distinguishes between nature and creation: "nature is usually seen as a system which can be studied, understood and controlled, whereas creation can only be understood as a gift from the outstretched hand of the Father of all" (n. 176). In contrast to the NEP which upholds an eco-centric view of the world, LS promotes a theocentric view in which God, and not human persons or any other created reality, is at the center. The best way, therefore, "to restore men and women to their rightful place, putting an end to their claim to absolute dominion over the earth, is to speak once more of the figure of a Father who creates and who alone owns the world. Otherwise, human beings will always try to impose their own laws and interests on reality" (n. 75). At the same time, however, Christian thought as communicated in LS acknowledges that God gratuitously shares this theocentric space with human persons, elevating them to be co-creators and entrusting them with the responsible stewardship of creation.

Another major departure from current thought on sustainability and ethics in LS seems to be the acknowledgement of integral ecology as well as a forceful discussion and very clear focus on the impact of environmental degradation on the poor. For instance, the encyclical states that "a sense of deep communion with the rest of nature cannot be real if our hearts lack tenderness, compassion and concern for our fellow human beings" (LS, n. 90), those who are poor, voiceless, and who often have to bear the brunt of climate change. Francis asks us to "not only keep the poor of the future in mind, but also today's poor, whose life on this earth is brief and who cannot keep on waiting" (LS, n. 162). The encyclical lays out very clearly that "a true ecological approach *always* becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear both the cry of the earth and the cry of the poor" (LS, n. 49, emphasis in original). The Holy Father reminds us that "the human environment and the natural environment deteriorate together; [that] we cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation" (n. 48). In his discussion of St. Francis of Assisi, he specifically notes that the saint "shows us just how inseparable the bond is between concern for nature, justice for the poor, commitment to society, and interior peace" (n. 10).

For Francis, the effects of environmental degradation will also impact developing economies the most:

Many of the poor live in areas particularly affected by phenomena related to warming, and their means of subsistence are largely dependent on natural reserves and eco-systemic services such as agriculture, fishing and forestry. They have no other financial activities or resources which can enable them to adapt to climate change or to face natural disasters, and their access to social services and protection is very limited. (LS, n. 25)

Nevertheless, the poor are entitled to "the right to a life consistent with their inalienable dignity" (n. 30). "For poor countries, the priorities must be to eliminate extreme poverty and to promote the social development of their people" (n. 172).

Christiansen (2015) points out that "the Holy Father's view of the poor is unromantic" (emphasis added). In LS, the Pope identifies the many ways

in which the poor suffer from environmental degradation and climate change, such as lack of clean water and energy, forced migration, and human trafficking, among others. Consider, for example, the millions of tons of used electronic goods that get dumped in poor countries, thereby creating a phenomenal amount of toxic e-waste that the poor in these countries have no idea about (Vidal, 2013). Such waste creates a health hazard that they must bear through no fault of theirs.

Indeed, the kind of eco-centrism displayed by LS places the condition of the poor and the marginalized at the center of the ecological conversation and debate—the encyclical states that "the deterioration of the environment and of society affects the most vulnerable people on the planet" (LS, n. 48). Unfortunately, it needs to be said that, "generally speaking, there is little in the way of clear awareness of problems which especially affect the excluded. Yet they are the majority of the planet's population, billions of people" (n. 49). LS is therefore critical of how the poor are often treated in international political and economic discussions, saying that "one often has the impression that [the poor's] problems are brought up as an afterthought, a question which gets added almost out of duty or in a tangential way, if not treated merely as collateral damage" (LS, n. 49).

LS thus advocates shifting from a focus merely on the natural order to a view of sustainability that places considerable emphasis on the condition of the poor and marginalized. It promotes a solidarity with the poor that involves making their situation better, whether it be in constructing clean and good neighbourhoods, generosity in the transfer of clean technologies to poorer countries, or even in the protection of people's jobs. What follows, therefore, are some thoughts on base principles for normative business guidelines, followed in turn by examples of their embodiment in strategy. Such principles aim to attain sustainability for both people and the planet, with a special view of the poor and marginalized.

POLICY AND PROGRAM IMPLICATIONS FOR BUSINESS

Laczniak and Kennedy (2011) identified comprehensive sustainability as a hyper-norm across the codes of conduct of multinational companies. They found that consideration and respect for the environment were key, including prevention and care for future generations through sustainable development, safe waste disposal, energy conservation, and environmental restoration (CERES, 2009; American Marketing Association, 2008; Caux Roundtable, 2010; OECD, 2011). However, firms often adopt sustainable business practices primarily for financial gain, and differing perspectives on what sustainability is and what its appropriate actions are create many tensions (Hahn, Pinkse, Preuss, & Figge, 2015) that erode trust in business environmental reporting, especially when the use of the triple bottom line lacks a complete application of sustainability (Gray & Milne, 2002, 2004; Moneva, Archel, & Correa, 2006). In fact, there are some who hold that the economic position of LS is deeply flawed, particularly in its attack on free markets (cf. Gregg, 2015).

It may appear at first glance that LS is indeed promoting an antibusiness rhetoric, as there are numerous places where Francis does criticize business. However, as Cardinal Turkson (Lubov, 2015) points out, the encyclical is actually reminding businesses of their responsibility to society. According to the International Association of Jesuit Business Schools, sustainability in the context of business is defined as the responsibility to take into consideration "the broad set of interconnected issues that encompass, but are not limited to, achieving environmental conservation, social justice, poverty eradication, social entrepreneurship, desirable production and consumption patterns, species preservation, and spiritually rich lives" (Stoner, 2013: 2). Specific and normative guidelines can thus be derived from this understanding of sustainability and taught as an eco-justice approach in business schools. Such guidelines are unique because of the different philosophical bases of LS, and they acknowledge that justice for the poor in human sustainability is linked with the suffering they endure due to environmental degradation and lack of resources (Brown, 2009).

LS's rejection of the DSP, move toward the NEP, and unique outlook of integral ecology also provide us with an extended and more thoughtful set of guidelines for sustainable corporate social responsibility. According to the Catholic Climate Covenant (2013) and the St. Francis Pledge, these guidelines may include 1) the duty to care for the environment, the poor, and the vulnerable; 2) education on causes of climate change; 3) the assessment of contributions to climate change in terms of energy use, consumption, and waste; and 4) the reduction of contributions to climate change. Most Jesuit university business schools are already following such an eco-justice approach (Sabbaghi & Cavanagh, 2015).

The first guideline, the duty to care for the environment, the poor, and the vulnerable, prescribes the use of sustainable business practices and prioritizing the impact of business decision-making on the environment and the poor, especially when it comes to environmental degradation from production processes, resource use, product or service use, and disposition, to name a few. This also includes any business practices which perpetuate the situations of, or mistreat, the poor and vulnerable, such as using a developing nation's natural resources to the detriment of their ability to do the same, possibly because it increases the price of the resource or decreases its availability.

This guideline would have an organization commit not just to implementing piecemeal environmental or community initiatives such as recycling or sponsorship, but also to having such initiatives as part of the business philosophy behind all strategic decision-making. Asking about the impact of every decision on the environment and the poor, and making that a part of formal decision-making criteria, are steps toward such a commitment. It is a perspective that must be considered at all points in the supply chain up, until and including disposition.

If employees understand the consequences of day-to-day decisions only in broad strategic strokes, a truly sustainable philosophy cannot permeate throughout the organisation. Hence the second guideline educating them about the concerns outlined above and on the causes of climate change. Orientations, internal newsletters, and ongoing training would be practical options in this regard.

The third guideline, assessment of contributions to climate change, encompasses not only a baseline of current performance but also policy, formal decision-making processes, and criteria. Ongoing audits can also potentially use sustainability tracing assessments such as AASHE (www. star.aashe.org).

The final guideline, reducing contributions to climate change, requires action from the organization. It will be necessary to set goals regarding previously assessed impacts, monitor progress, and work toward reducing those impacts.

In addition to all this, the Integrative Justice Model (IJM) (Santos & Laczniak, 2009; Laczniak & Santos, 2010) provides even more guidance for implementing social justice and sustainability within an eco-justice approach. It posits that business has a responsibility to all parties within a stakeholder perspective (e.g. Freeman, 1984). Indeed, while some have warned that seeing the environment as an independent stakeholder is erroneous, a view toward human sustainability can be a more objective and unifying principle of sustainability across businesses. Human sustainability, in its contribution to human welfare, cares for the environment without doing it any harm (Gibson, 2012); in fact, a view of human sustainability may embody more fully the view of sustainability espoused by LS.

In conjunction, therefore, with the discussions on the NEP, LS, IJM, and human sustainability, we may offer the following values for the firm, particularly with regard to the poor: 1) authentic engagements with customers and the environment which are non-exploitative; 2) cocreation of value with customers and the environment so that all parties are better off; 3) investment in creating holistic eco-systems that all can participate in without endangering the environment; 4) representation of the environment and the poor in decision-making; 5) long term profit management to ensure support for the poor and the environment instead of maximization of business profits.

Authentic engagement refers to interactions with customers and the environment that are not just about financial gain for the organization. Co-creative opportunities, for instance, are overlooked when only engaging with customers to sell them products or services, or gain ideas for product development. Co-creation implies that the customer gains more than just a product or service from the interaction, such as personal insights or community membership.

Co-creation applies to the environment as well. For example, instead of either just taking resources or allowing waste to degrade nature, organizations need to not only give back to the environment but to improve it, such as with clean technology development, environmental renewal, and conservation programs. In short, ensuring that interactions with people or the environment result in all parties (and not just business alone) being better off is paramount.

As with the St. Francis pledge, the IJM also suggests (although more explicitly) that the poor, vulnerable, and environment be included in decision-making. This implies that any potential impact on them must be considered among decision-making criteria.

Finally, pursuing long term profit management to support the poor, vulnerable, and the environment moves away from a growth model exclusively for profit's sake, and toward a more humanistic approach to profit distribution that does not tolerate the excessive use of resources or negative outcomes in exchange for short term gains.

Such principles likely run counter to a culture that subscribes to the DSP, where economic liberalism and growth are the base principles and placing quality of life before profit entails a complete turnaround in business decision-making and objectives. These principles also go against the consumerism championed for economic growth, and question the assumption that humans are truly free when they purchase what they

want when they want it. Instead, they encourage authentic freedom, which is about personal fulfilment, peace, joy, and having no need for excessive consumerism to achieve such.

Seeking sustainable *and* equitable development thus brings to the fore the inclusion of the poor in the business distribution of goods and resources. It recognizes that the poor possess the same human dignity as the rich, and that the rich, by satiating their appetites, also use up the poor's resources, leaving them unable to meet their own needs. The fair and just distribution of goods and resources, along with seeking sustainable business practices and development, need to be at the heart of business policy, for seeking the common good is a duty for all businesses.

Some examples of strategies that embody these principles are as follows:

- Support for local self-sufficiency, possibly through cooperatives. In addition to helping create local selfsufficiency, the identification and development of needed resources through business partnerships with locals can also realize benefits such as knowledge sharing and a strong, productive, and thriving community. For instance, businesses can support the development of local enterprises and co-operatives by providing start-up training and capital. They can also use the location of suppliers as a decision-making criterion, even if places further afield are less expensive. An excellent example of this is that of the Mondragon Co-operative, which played a big role in helping the Basque region of Spain achieve economic self-sufficiency (Gonzales & Phillips, 2013).
- Using production that is energy efficient, low in pollution, and light on resources. Clean technology and upgrading production facilities to more efficient systems take waste generation, processing, collection, transportation, and disposal into consideration. Product design-forenvironment as described by Fuller (1999) gives specific steps and issues regarding such, and also looks at the sources of materials and effects of their usage. Unilever, for example, has committed to achieving zero net deforestation in its supply chains by 2020 (http://www. unilever.com).

- *Removing products that are energy inefficient, polluting, and heavy on resources.* Making products that are durable or use less materials overall from non-renewable sources is one way of modifying the materials mix in support of the environment. Designing in view of recycling processes, disassembly, or re-use can also be considered (Fuller, 1999). Examples of such strategies in action, as carried out by Yealands Wines in New Zealand (http://www.Yealands. co.nz), are reductions in packaging weight and the use of renewable energy sources and bio-diesel.
- Creating cradle-to-cradle production and consumption of business outputs. As the end goal of the previous two points, the complete product system life cycle, which includes raw materials extraction, materials-components manufacturing, finished products manufacturing, product use or consumption, and waste disposal (Hunt, Sellers, & Franklin, 1992), needs to be considered. For example, instead of just aiming to create as little waste as possible for terminal disposal, a firm may use reverse waste management, re-use, or recycle to further mitigate actual waste produced. New Belgium Brewery in Colorado has managed to achieve this through efficiencies such as re-using waste water to create power. They have managed to divert 99.99% of their waste away from the landfill (http://www.newbelgium.com).
- Promoting diversified agriculture to support biodiversity and species protection. Companies must ensure that all parts of the ecosystem are thriving and that they are not supporting specific species to the detriment of others. This applies to the farming of raw materials as well as the production, consumption, and disposition of business offerings. Sustainable agriculture in the form of organic farming is one option in this regard.
- *Modifying consumption behavior to focus on needs instead of appetites.* Redesigning products with dematerialization in mind so that consumers receive the same benefits but with less impact on the world is a start (Herman, Ardekani, & Ausubel, 1989). Since consumers often do not realize the consequences of their consumption patterns, education on how these affect the environment, the poor, and the vulnerable is necessary. Patagonia is a company that does this in many ways; one example is their Tools

for Grassroots Activist Conferences which empower and educate consumers (http://www.patagonia.com).

• Accounting and pricing that include the costs of business side effects on physical and mental health, local economy and culture, public safety, quality of life, and environmental degradation. One method to achieve this is through lifecycle assessment that aims to measure impacts and improvements, along with inventory analysis which can provide physical measures (Society of Environmental Toxicology and Chemistry, 1991). Moreover, while pricing for the environment includes the product's eco-costs, it might also be used to acknowledge change from a growth model to a steady state one. Full-cost/environmental accounting for this concern is currently being developed (Keoleian, 1996).

CONCLUSION

This article sought to uncover the base philosophical orientation of LS by outlining its standpoint alongside the Dominant Social Paradigm (DSP) and the New Ecological Paradigm (NEP). With its rejection of the assumptions and characteristics of the DSP and its alignment with some assumptions of the NEP, LS provides a starting point for business and society to begin implementing more humane and sustainable practices and change their thinking regarding sustainability. Its major departure from the NEP, along with a focus on the poor and integral ecology, can thus be its major contribution to thought on sustainability.

Unfortunately, limited acceptance of the paradigm illustrated by LS is firmly wedged in the unthinking pursuit of economic growth as a goal for society along with economic and political liberalism. Changing such views may be the single biggest barrier to change and a more sustainable future, for "the principle of the subordination of private property to the universal destination of goods, and thus the right of everyone to their use, is a golden rule of social conduct and the first principle of the whole ethical and social order" (LS, n. 93) that sustains all people.

Future research into policy, ethics, and behavioral interventions that can change the prevailing paradigm is desperately needed. Combining such research using integral ecology may be the very first step, but to end with the words of Francis: "Human beings too are creatures of this world, enjoying a right to life and happiness, and endowed with unique dignity. So, we cannot fail to consider the effects on people's lives of environmental deterioration, current models of development and the throwaway culture" (LS, n. 43).

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LAUDATO SI'*

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One of the many benefits of the first space flights to the moon in the late 1960s were beautiful pictures of planet Earth taken by the astronauts, that blue globe swathed in clouds and floating in the vastness of space. For many who saw them, the very perspective of those pictures changed their sense of our home—it seemed small, fragile even, and indeed, it is as we have learned. The earth is under threat from abuse and neglect, and we are responsible.

No one has addressed that more powerfully than Pope Francis in his encyclical on the environment, *Laudato Si'* (Francis, 2015). This long anticipated document is not primarily about climate change as is so often alleged, although climate change is one of the Holy Father's concerns. Rather, it is an encyclical on how to protect our "common home," or as St. Francis of Assisi would say, our Sister, Mother Earth, who now cries out to us because of the harm we have inflicted on her through our irresponsible use and abuse of the goods which God has endowed her with (2).¹

Laudato Si' is very long—246 paragraphs and 163 pages divided into six chapters—but its concreteness and lack of abstract jargon, unlike most encyclicals, makes it an easy read. Two particular themes are woven throughout: first, we belong to one human family, dependent on each

[•]A similar article appears as Chapter 28, "Our Fragile Home," in Thomas P. Rausch, *The Slow Work of God: Living the Gospel Today* (New York, NY: Paulist Press, 2017), pp. 193-201.

¹Numbers in parentheses refer to paragraph numbers in Laudato si'.

other, and are related to all other living beings; second, the ecological crisis calls for a fundamental change in our lifestyles.

CHAPTER I: WHAT IS HAPPENING TO OUR COMMON HOME

In Chapter 1 and throughout the encyclical, the Pope calls attention to how we have plundered and abused the earth, filling her with filth and waste, poisoning her atmosphere, cutting down her forests that purify her air, and polluting her life-giving streams and oceans that teem with living creatures. Each year, we generate millions of tons of waste, much of it non-biodegradable, toxic, or even radioactive (21). The poor are especially affected—people get sick from insecticides, fungicides, herbicides, and agro-toxins. There are many premature deaths (20), and children are especially vulnerable.

These problems are closely linked to a throwaway culture. Most of the paper we produce is thrown away and not recycled, and our industrial system has not developed the capacity to absorb and reuse the waste and by-products it generates. Think of the global pollution problems today—in some countries, for example, raw sewage runs out of houses and down the streets.

Or consider the acres of previously forested land in Alberta, Canada, which are now vast, desolate areas devastated in the search for oil from tar sands. Companies have to resort to alternate measures to extract the oil, such as surface mining (digging up the rock or sand covering the oil-laden sediment) or injecting steam to get it out of the earth. Doing so uses up an enormous amount of water, distributes toxic metals into the surrounding watershed, and, perhaps most importantly, leads to an estimated 14% higher level of greenhouse gas emissions compared to conventional oil because some natural gas must be burned simply to convert the bitumen into a usable form (Stromberg, 2014). According to the U.S. Department of Energy, these industrial processes produce more climate pollution than it does to extract and process oil the conventional way (Biello, 2013), while similar efforts in the United States are also polluting fields and streams with oil.

In 2012, an estimated 8.4 million people died from air, water, and land pollution, according to the Global Alliance on Health and Pollution: "pollution alone kills three times more people than HIV, malaria, and tuberculosis combined" (Global Alliance on Health and Pollution, 2014). According to the World Health Organization, seven million people die annually from air pollution alone. Many also do not have access to safe drinking water, which the Pope notes is being turned into a commodity. We forget that it is not just American tourists who get sick from the water in Mexico; millions of children suffer from the same problem, and more than 1,600 of them die every day from diseases caused by drinking unsafe water. Given that access to safe drinking water is a basic human right, not something subject to the laws of commerce (30), Francis rightfully asks if we no longer have any concern for coming generations (161).

Francis also points to a "very solid scientific consensus" on the warming of the climatic system (23), caused primarily by the concentration of greenhouse gases that are generated from human activity. Recent studies show that these gases (carbon dioxide, methane, nitrogen oxides, and others) are concentrated in the atmosphere and do not allow the warmth of the sun's rays reflected by the earth to disperse in space. We need to replace highly polluting fossil fuels progressively, especially coal and oil (165), for their intensive use only aggravates the problem (23). This is not new teaching—Pope Paul VI, Pope John Paul II, and Pope Benedict XVI all called for policies to mitigate greenhouse gas emissions and assist those most affected by the harmful effects of climate change. Africa, in particular, is especially vulnerable (51). The abuse of the environment affects us all, especially the poor, such as that quarter of the world's population that lives on or near coastlines, and it contributes to the massive migration taking place today.

Francis praises the efforts of the international community to address these issues, citing the 1992 Earth Summit in Rio de Janeiro which spoke of the whole earth as an ecosystem, the 1972 Stockholm Declaration, the Basel Convention on hazardous wastes, and the Vienna Convention on the protection of the ozone layer. However, he notes that the 2012 Conference of the United Nations on Sustainable Development in Rio de Janeiro issued a wide-ranging but ineffectual document, reminding countries that they must not place their national interests above the global common good (169). One hopeful sign, on the other hand, was the 2015 United Nations Climate Change Conference in Paris where China played an important role.

Francis's encyclical addresses every person living on the planet, thereby speaking to other churches and Christian communities, religions, and all people of good will. He is concerned that we are exploiting the rich resources of our planet. With thousands of plant and animal species disappearing every year, he says that because of us, so many creatures "will no longer give glory to God by their very existence" (33). Therefore, while acknowledging that the Church does not have all the answers, he calls repeatedly for dialogue (61). He wants to draw on the best scientific research available to us today (15), but emphasizes that saving the planet

involves all of us and not just the scientific community: "Our goal is not to amass information or to satisfy curiosity, but rather to become painfully aware, to dare to turn what is happening to the world into our own personal suffering and thus to discover what each of us can do about it" (19). The Pope is calling all people to a profound conversion, to a new vision, one that contemplates the threatened beauty of our earth, and to see also the faces of the poor who are most affected by climate change.

CHAPTER II: THE GOSPEL OF CREATION

Chapter II, where this Jesuit pope is at his most Franciscan, is especially beautiful. The encyclical echoes the Bible in teaching about the immense dignity of each person, created in the image and likeness of God and declared good by the Creator. From a Biblical perspective, the Pope argues that human life is grounded in three fundamental and closely intertwined relationships: our relationships with God, with our neighbor, and with the earth itself. These three vital relationships have been broken, however, both outwardly and within us, and Genesis 3 sees this rupture as the result of sin, the sin of our presuming to take the place of God and refusing to acknowledge our creaturely limitations. Francis argues that the Bible has no place for a tyrannical anthropocentrism at the expense of, or unconcerned for, God's other creatures, and refers specifically to his namesake, Francis of Assisi, who celebrated a harmony with all of them (66–68). Ecologists, long skeptical of anthropocentrism at the expense of the environment, have been delighted with this emphasis.

We cannot address the problems of our planet without reshaping our relationships with God, our neighbors, and the earth itself. From a Christian perspective, the Pope's vision here is profoundly Trinitarian: God is not a distant, solitary watch-maker but a loving Father who brings all things into being through the Word and fills creation with his life-giving Spirit. The earth, therefore, is not our own; we do not have absolute dominion over that which belongs to God alone. We are caretakers, not owners (75).

According to Peter Cardinal Turkson, a major force behind *Laudato Si'*, "the word 'stewardship' only appears twice" in the encyclical while the word "care" appears dozens of times (EcoJesuit, 2015). Naomi Klein says that this is no accident—while stewardship speaks about a relationship based on duty, "when one cares for something it is something one does with passion and love" (Klein, 2015). This means a change in our way of thinking, for, as Fr. Seán McDonagh, also part of the drafting team for the encyclical, said, "We are moving to a new theology." He translates a Latin prayer that was once commonly recited after Communion during the season of Advent as an example: "Teach us to despise the things of the earth and to love the things of heaven" (Klein, 2015), and cautions that overcoming centuries of loathing the corporeal world is no small task.

In speaking of evolution, Francis notes the "sheer novelty involved in the emergence of a personal being within a material universe," suggesting the action of God and a particular call to life on the part of a "Thou" who also addresses human beings in this highly personal way (81). He writes that it "is clearly inconsistent to combat trafficking in endangered species while remaining completely indifferent to human trafficking, unconcerned about the poor, or undertaking to destroy another human being deemed unwanted" (91).

CHAPTER III: THE HUMAN ROOTS OF THE ECOLOGICAL CRISIS

Chapter III stresses the human roots of the ecological crisis. Francis calls not just for a heightened environmental consciousness but also for a substantial change in the way we live, which means changing our lifestyles, habits of consumption, and methods of production. All these contribute to climate change, which is a global problem with environmental, social, and economic consequences. Here the Pope is radically challenging the outlook we inherited from our culture!

Francis recognizes the contributions that technology has made to human flourishing, and his enumeration of modern inventions and scientific advances makes it clear that he is not against science or technology (102). Techno-science, when properly directed, can improve the quality of human life—who can deny, he says, the beauty of an aircraft or a skyscraper (103)? At the same time, however, Francis echoes a constant theme of Benedict XVI (located, for example, in the latter's encyclical on hope, *Spe Salvi*)—"that scientific and technological progress cannot be equated with the progress of humanity" (113). He warns especially about the risk of tremendous power resting in the hands of a few: "The fact is that 'contemporary man has not been trained to use power well' because our immense technological development has not been accompanied by a development in human responsibility, values and conscience" (105).

Despite all this, we tend to believe that every increase in power means an increase in progress, which is not necessarily true. We have not been taught to use power well, or to recognize the great responsibility that goes with it. We assume that there is an infinite supply of the earth's goods, while a technocratic paradigm assumes that every advance in technology is for profit without paying attention to its potentially negative impact on human beings (109). We need to keep the larger picture in mind:

Ecological culture cannot be reduced to a series of urgent and partial responses to the immediate problems of pollution, environmental decay and the depletion of natural resources. There needs to be a distinctive way of looking at things, a way of thinking, policies, an educational program, a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm. (111)

For Francis, a modern anthropocentricism means that we neglect to monitor the harm done to nature, or to acknowledge the reality of the poor person or one with disabilities. He speaks of the value of work, indeed of our vocation to work, which is part of the meaning of life (128), and cautions against an unbridled free-market economy (129) and "indiscriminate genetic manipulation" (131).

CHAPTER IV: INTEGRAL ECOLOGY

Most important is the encyclical's basic point that as human beings we belong to one single human family, dependent on each other and on the earth that is our common home. As the Pope repeats many times, all things are connected and dependent on one another (16, 42, 70, 89):

Time and space are not independent of one another, and not even atoms or subatomic particles can be considered in isolation. Just as the different aspects of the planet—physical, chemical and biological—are interrelated, so too living species are part of a network which we will never fully explore and understand. A good part of our genetic code is shared by many living beings. (138)

We need to be in solidarity with each other and care for the earth, not exploit it, for it and its fruits represent a shared inheritance and are meant to benefit everyone. We need a social perspective, one that is especially mindful of the rights of the poor and the underprivileged (93).

Nature is not something separate from us; we are parts of a network which we will never fully understand, one in which we share a genetic code with many living beings (139). We are becoming more aware of the importance of how different creatures relate to one another in making up the larger units we call "ecosystems" which we depend on for our own existence. "Sustainable use" thus means considering each ecosystem's regenerative ability (140), pointing to how they "interact in dispersing carbon dioxide, purifying water, controlling illnesses and epidemics, forming soil, breaking down waste, and in many other ways which we overlook or simply do not know about" (140).

Francis is challenging all to a profound conversion, to a change of lifestyle, and to adopt what he calls an "integral ecology" that goes beyond biology alone to take us to the heart of what it means to be human (10–11, 137). Those who ridicule expressions of concern for the environment or are passive need an "ecological conversion" so that their encounter with Christ becomes evident in their relationship with the world around them (217). They need to come to an integral ecology, one that respects both its human as well as social dimensions.

Nature can no longer be regarded as a mere setting in which we live. We are part of it, included in it, and in constant interaction with it. Nor can we continue to ignore the poor—Francis writes that "a true ecological approach *always* becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor*" (49, emphasis in original). The environmental crisis, for example, affects nature and society, the social and the environmental (139). What Benedict XVI called "human ecology" is thus inseparable from the principle of the common good, the central and unifying principle of social ethics (156). It includes being concerned about lack of housing, public transportation, and extreme poverty.

When I see films on global poverty, and realize that those disadvantaged peoples are also seeing films about our affluence, I wonder what will happen when they demand for their fair share, and fear for the future.

CHAPTER V: LINES OF APPROACH AND ACTION

The Pope acknowledges that international conferences and dialogue have moved the ecumenical agenda forward. We are more conscious of our interdependence, and are aware of the need to replace our ways with more sustainable practices and that an "ecological debt" exists between the global North and South due to commercial imbalances (51). Those nations that have benefited from industrialization at the cost of an enormous increase in greenhouse gases have a greater responsibility toward providing a solution. Poor countries, on the other hand, need to develop less polluting forms of energy production, but they need the assistance of wealthy countries, some of which have "scandalous" levels of consumption after having experienced great growth at the cost of ongoing pollution. The solidarity of all peoples is key (172); we cannot leave the poor to pay the price (170).

Thus, while Francis acknowledges that the Church does not presume to answer scientific questions, he is concerned about honest debate that brings politics and the economy into dialogue. The environment will not be safeguarded by a free market and profit driven economy (190), yet he is calling not for an end to capitalism but for a spirituality more sensitive to our hurting planet. For instance, we may have to accept decreased growth in some parts of the world so that poorer regions may begin to flourish (193). He calls for a new, integral, and interdisciplinary approach to politics, one which will no longer tolerate organized crime, human trafficking, the drug trade, and violence. Moreover, given that majority of the world's population profess to be believers, religion also has its own role to play, particularly in opening new horizons.

CHAPTER VI: ECOLOGICAL EDUCATION AND SPIRITUALITY

In the final chapter, Francis calls on all to set forth on the long path of renewal, especially to a change of lifestyle (206) or, in religious terms, a conversion. He challenges what he calls the "myths" of modernity, that is, individualism, the myth of ongoing progress, consumerism, and unregulated free-markets (210). For instance, many young people in the most affluent countries are aware of a need for change but have grown up in a milieu of extreme consumerism. These are characteristic themes for Francis—in his 2013 encyclical *Evangelii Gaudium*, he pronounced a firm "no" to an economy of exclusion, inequality, and

trickle-down theories which assume that economic growth, encouraged by a free market, will inevitably succeed in bringing about greater justice and inclusiveness in the world. This opinion, which has never been confirmed by the facts, expresses a crude and naïve trust in the goodness of those wielding economic power and in the sacralized workings of the prevailing economic system. (Francis, 2013)

In *Laudato Si'*, he contrasts such a "utilitarian mindset," characterized by consumerism, competition, and an unregulated market, with an environmental education that seeks to recover levels of ecological equilibrium with one's self, in solidarity with others, and with God.

Environmental education should strive to embrace the transcendent that gives environmental ethics their deepest meaning (210). At the same time, it should help develop an "ecological citizenship" that encourages us to reduce water consumption, separate refuse, cook only what can reasonably be consumed, use public transportation or car-pooling, plant trees, turn off unnecessary lights, and so on (211). We can each do something.

Moreover, the care for nature includes a capacity for living together and in communion with others, in a kind of "universal fraternity" (228). Francis beautifully says that the "universe unfolds in God, who fills it completely. Hence, there is a mystical meaning to be found in a leaf, in a mountain trail, in a dewdrop, in a poor person's face" (233). "At the end, we will find ourselves face to face with the infinite beauty of God" (243).

CONCLUSION

Francis's encyclical is both poetic and practical: he reminds all to say grace before meals while noting that our food comes from the earth (227). Running throughout are the strategic principles of gradualism and incrementalism—we cannot solve everything at once, yet we need to get started. He stresses repeatedly the importance of dialogue, and that more dangerous than a doctrinal relativism is a practical relativism which gives absolute priority to our immediate convenience. Interestingly enough, he avoids the language of a culture of life and a culture of death, so often used by John Paul II.

Francis is also striving to speak for the whole Church; he does not want to be a solitary voice. He thus cites bishops' conferences from around the world more than twelve times, including those of Brazil, New Zealand, Southern Africa, Bolivia, Portugal, Germany, Argentina, the Dominican Republic, the Philippines, Australia, and the United States, among others. For example, these beautiful words come from the Roman Catholic Bishops' Conference of the Philippines: "Who turned the wonderworld of the seas into underwater cemeteries bereft of color and life?" This citing of bishops' conferences is in contrast with John Paul II and Benedict XVI who did not cite their teaching authority as much.

The Fathers of the Church said that the poor man has the right to take from those who have more than they need for his own needs (Paul VI, 1965: 69). The Pope's Roman Catholic and communitarian sensibility, obvious throughout the encyclical, continues this line of thought. Francis writes that the fruits of the earth are meant to benefit everyone, that the climate, our atmosphere, and the earth's natural resources are goods held in common, "belonging to all and meant for all" (23). He argues that the Christian tradition has never recognized the right to private property as absolute or inviolable, and has stressed the social purpose of all forms of such property (93). Similarly, he also rejects the idea that national sovereignty is an absolute right, and stresses that we need global regulatory norms instead (173). I wonder how many would welcome his teaching today.

Advancing Roman Catholic tradition while staying rooted in it, *Laudato Si'* is based not on new teaching but on the Church's social tradition, particularly in its emphasis on the common good and the dignity of the human person. Francis stresses a consistent ethic of life, saying that it is inconsistent to work to preserve animal species without at the same time being concerned about human trafficking or while being indifferent to the needs of the poor or those "deemed unwanted" (91). For instance, arguing that "concern for the protection of nature is also incompatible with the justification of abortion," he asks, "How can we genuinely teach the importance of concern for other vulnerable beings ... if we fail to protect a human embryo?" Quoting Benedict XVI, he says that if "personal and social sensitivity towards the acceptance of the new life is lost, then other forms of acceptance that are valuable for society also wither away" (120).

Francis therefore has some cautions. He rejects population control as a means to address the environmental crisis, stressing the unique difference between humans (transcending biology) and animals, even allowing experimentation on animals if it can contribute to saving human lives. He argues that gendered differences should be respected, and differentiates God from creation, which in the Eucharist is "projected towards divinization ... towards unification with the Creator himself" (236). The Pope's eucharistic vision here is deeply Roman Catholic.

A Christian spirituality should encourage a prophetic and contemplative lifestyle; it should not be obsessed with consumption (222). Francis's encyclical *Laudato Si'* is a beautiful meditation on the damage we are doing to our Sister Earth, and a call to the conversion necessary to save our common home. St. Francis of Assisi could not have said it better!

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RESÚMENES

Laudato Si' y la Ecologia Integral: Una Reconceptualización de la Sostenibilidad

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Resumen. El presente estudio analiza los conceptos de la sostenibilidad a través de la perspectiva de la Enseñanza Social Católica (ESC) con énfasis en *Laudato Si*'. La ESC amplía el foco de la sostenibilidad e incluye la justicia social haciendo hincapié en la dignidad humana, el bienestar común y *caritas*. En la ESC se entiende la justicia como algo estructural mientras que las obligaciones medioambientales se conectan al desarrollo humano integral y la paz. En *Laudato Si*', el Papa Francisco nos llama para luchar contra los sistemas injustos que se imponen utilizando un reordenamiento de múltiples ecologías: medioambiental, económico, social, cultural y de vida cotidiana. Basándose en este reordenamiento, él desarrolló más el concepto de la *ecología integral*, y nosotros mostramos cómo abarca un grupo de conceptos de sostenibilidad que existe en la ESC, y sobre todo,

cómo cambia el enfoque y alcance de la sostenibilidad. Desgraciadamente, a pesar de las buenas intenciones, algunas instituciones malinterpretan y usan la palabra "sostenibilidad" para justificar sistemas que tienen como resultado consecuencias "insostenibles." Mostramos entonces cómo *Laudato Si*' ofrece una solución a esas prácticas cambiando el concepto de la sostenibilidad a través de la ecología integral.

Palabras clave: *Laudato Si'*; Enseñanza Social Católica Romana; ecología integral; ecología humana; desarrollo sostenible; justicia social; insostenibilidad comercial

La Desigualdad, la Dignidad, y el Desafío de la Sostenibilidad

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Resumen. El mundo se enfrenta a amenazas importantes como la desigualdad y el cambio climático que son fuentes de inestabilidad social y de civilizaciones. Las crisis afectarán mucho más a los pobres del mundo que a los ricos. Además, una razón fundamental de la pobreza y el problema de la diferencia creciente entre los ricos y los pobres es porque la pobreza muy a menudo resulta en una violación de la dignidad de la gente humilde. Hoy en día, el sistema comercial fomenta más la materialidad, el consumo y la tasa de producción, exteriorizando el coste que se pueda, y así colocando este coste a las sociedades y el medioambiente. El presente artículo afirma que más atención a la dignidad humana y a todos los seres, junto con cambios sistémicos que incorporan nuevas medidas de progreso y cumplimiento, la internalización del coste actualmente exteriorizado, el suministro de servicio decente y la consideración de costos ecológicos, entre otros cambios, pueden ayudar a los negocios a cambiar el mundo a un contexto más igual y sostenible.

Palabras clave: responsabilidad empresarial; sostenibilidad; desigualdad; dignidad

Laudato Si' y la Perspectiva del Papa Sobre la Deuda Ecológica: Una Exploración Empírica

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Resumen. En 2015, el Papa Francisco presentó su segunda encíclica *Laudato Si': Sobre el Cuidado del Hogar Común*¹, cuya idea central es la preocupación del Papa por el futuro de nuestro planeta, nuestra casa común, y la búsqueda de un desarrollo sostenible e integral. El objetivo de este artículo es criticar y estudiar de manera empírica la noción de la deuda ecológica tal como se describe en la encíclica², empezando con el contexto histórico de los orígenes y uso de la palabra. Luego estudiaremos la discusión del Papa sobre la deuda ecológica y su denuncia de las empresas multinacionales en *Laudato Si'* que conecta con el llamado

¹Francisco, *Laudato Si': Sobre el Cuidado del Hogar Común* (Ciudad del Vaticano: Libreria Editrice Vaticana, mayo 24, 2015). Disponible en http://w2.vatican.va/content/ dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclicalaudato-si_en.pdf (acceder junio 29, 2017).

²Francisco, los números 51 y 52.

hipótesis del refugio de contaminación que dice que las industrias que producen mucha contaminación en países desarrollados trasladan sus operaciones "sucias" a los países en desarrollo que tienen regulaciones medioambientales permisivas. De la misma manera, proponemos que un aumento de las emisiones de gases de efecto invernadero está relacionado con la extracción de recursos y las actividades de exportación de mercancía de las empresas multinacionales en los países en vías de desarrollo donde esas actividades y la contaminación producida están sujetas a regulaciones menos estrictas debido a las necesidades del crecimiento económico. Se crea entonces una deuda ecológica cuando la exportación de mercancía de países en desarrollo a países más desarrollados viene a costa del medioambiente. Nuestro artículo conecta Laudato Si' con la hipótesis del refugio de contaminación, permitiéndonos estudiar de manera empírica la declaración del Papa "Las exportaciones de algunas materias primas para satisfacer los mercados en el Norte industrializado han producido daños locales."3

Palabras clave: deuda ecológica; exportaciones de mercancía de países en desarrollo; refugio de contaminación

La Encíclica Papal *Laudato Si':* Un Enfoque de Sostenibilidad Atento a los Pobres

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³Francisco, número 51.

Resumen. El presente artículo busca reflexionar sobre *Laudato Si'*, la encíclica papal sobre la ecología y el desarrollo sostenible, y destapa su enfoque filosófico y práctico al medioambiente. Empieza con una discusión de los paradigmas de pensamiento que resumen el Nuevo Paradigma Ecológico (NPE) indicado en la literatura ecológica, así sirviendo para contextualizar la ecosofía de *Laudato Si'* dentro del pensamiento actual. Mostraremos que *Laudato Si'* se distingue de la NPE relacionando los pobres con nuestro concepto de la sostenibilidad y en su reflexión sobre la ecología integral. Se identifican principios específicos de sostenibilidad en los negocios y se recomiendan estrategias, como pautas para un planteamiento eco y justo al negocio y la educación empresarial.

Palabras clave: sostenibilidad; *Laudato Si*'; ecosofía; Nuevo Paradigma Ecológica; Paradigma Social Occidental Dominante; la pobreza; Enseñanza Social Católica Romana; modelo de justicia integral

Laudato Si'4

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Palabras clave: Laudato si'; encíclica; Papa Francisco

Uno de los numerosos beneficios de los primeros vuelos espaciales a la Luna a finales de los años 60 fueron las fotografías de la Tierra sacadas por los astronautas, aquel globo azul rodeado de nubes, flotando en la vastedad del espacio. Para los que las vieron, la misma perspectiva de las fotos cambió su sentido de nuestra casa—parecía pequeña, frágil incluso, y sí, era tal como habíamos aprendido. La Tierra está bajo la amenaza del abuso y descuido, y somos los culpables.

Ninguno lo ha tratado de una manera tan fuerte como el Papa Francisco en su encíclica sobre el medioambiente, *Laudato Si'*. Este

⁴Un artículo parecido aparece como el capítulo 28, "Nuestra Casa Frágil," en Thomas P. Rausch, *El Trabajo Lento del Señor: Viviendo el Evangelio en el Presente* (Nueva York, NY: Paulist Press, 2017), páginas 193–201.

documento esperado no se trata principalmente del cambio climático como se dice a menudo, aunque es una de las preocupaciones del Santo Papa. Es más bien una encíclica sobre cómo proteger "nuestra casa común," o como decía San Francisco de Asís, nuestra hermana, nuestra madre Tierra, que ahora clama por el daño que le provocamos a causa de nuestro uso irresponsable y del abuso de los bienes que Dios ha puesto en ella.⁵

Laudato Si' es muy larga—246 párrafos y 163 páginas divididos entre seis capítulos—pero su precisión y falta de jerga abstracta, a diferencia de muchas encíclicas, hacen que sea una lectura fácil. Dos temas particulares se entretejan en el documento: el primero, que pertenecemos a una única familia humana, dependientes el uno del otro y conectados a todos los demás seres vivos; el segundo, que la crisis ecológica exige un cambio fundamental en nuestra manera de vivir.

⁵Francisco, párrafo 2.

The journal welcomes submissions from all management disciplines (e.g., international business, accounting, marketing, finance, operations) and related disciplines (e.g., economics, political science) as long as the manuscript contributes to our academic understanding of the role of management in achieving global sustainability. These articles shall be subject to a double-blind review process overseen by the editorial board. Submissions of theoretical work, empirical studies, book reviews, and practitioner manuscripts in either Spanish or English are all encouraged. Submissions shall be encouraged across two lines, with research briefs and book reviews not exceeding 1500 words and full research papers not exceeding 7000 words.

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ESSAY

Laudato Si' Thomas P. Rausch, S.J.