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Editorial

Conservation biologists have a powerful new ally

Pope Francis may be the most popular leader on the world stage today. Given that popularity, conservation biologists should especially welcome his recent encyclical letter, *Laudato Si', On Care for Our Common Home* (2015). While the world's media have focused on the Pope's statements regarding climate change, *Laudato Si'* provides a powerful analysis and call to action on a wide range of environmental issues, and its first chapter devotes about twice as much space to biodiversity loss as it does to climate change.

Throughout his encyclical, Francis insists that humanity's relationship to the rest of nature should involve love and appreciation, gratitude and care. A techno-managerial approach to the natural world is insufficient, in part because by itself it is "unable to set limits" to humanity's demands. As he says in the introduction:

11. ... If we approach nature and the environment without [an] openness to awe and wonder, if we no longer speak the language of fraternity and beauty in our relationship with the world, our attitude will be that of masters, consumers, ruthless exploiters, unable to set limits on their immediate needs. By contrast, if we feel intimately united with all that exists, then sobriety and care will well up spontaneously ... [along with] a refusal to turn reality into an object simply to be used and controlled.

According to Pope Francis, the biodiversity crisis is a moral crisis. His analysis is worth quoting at length, not least for the clarity with which he links an underdeveloped environmental ethics with an overdeveloped Economy:

32. The earth's resources are ... being plundered because of short-sighted approaches to the economy, commerce and production. The loss of forests and woodlands entails the loss of species which may constitute extremely important resources in the future, not only for food but also for curing disease and other uses. Different species contain genes which could be key resources in years ahead for meeting human needs ... 33. 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. Each year sees the disappearance of thousands of plant and animal species which we will never know, which our children will never see, because they have been lost forever. The great majority becomes extinct for reasons related to human activity. Because of us, thousands of species will no longer give glory to God by their very existence, nor convey their message to us. We have no such right.

Conservation biologists of a secular bent may ground our sense of other species' intrinsic value in their own nature and evolutionary history, rather than in a transcendent deity (Wilson, 2007; Rolston,

2011). Nevertheless, most of us share the Pope's sense that extinction is a great moral wrong committed against other species and future human generations (Staples and Cafaro, 2012). His emphasis should encourage conservation scientists to discuss the moral aspects of conservation more explicitly.

As the encyclical's main discussion of biodiversity loss continues, Francis connects these moral judgments to specific policy proposals. He explains the need for more protected areas where the primary focus is on biodiversity preservation rather than economic exploitation (paragraph 37). He discusses the conservation value of biological corridors linking such protected areas (35) and clearly explains the difference between tree plantations and primary forests (39). Further on, he reminds readers that like individual species, natural communities hold both instrumental and intrinsic values that we should appreciate and preserve (140). In lines that read as if they could have been written by E.O. Wilson, the Pope insists on the importance of the little things that run the world and on the human costs of overdevelopment and loss of connection to wild nature:

34. It may well disturb us to learn of the extinction of mammals or birds, since they are more visible. But the good functioning of ecosystems also requires fungi, algae, worms, insects, reptiles and an innumerable variety of microorganisms. Some less numerous species, although generally unseen, nonetheless play a critical role in maintaining the equilibrium of a particular place. ... nowadays, [the] intervention in nature has become more and more frequent. As a consequence, serious problems arise, leading to further interventions; human activity becomes ubiquitous, with all the risks which this entails. Often a vicious circle results, as human intervention to resolve a problem further aggravates the situation. ... a sober look at our world shows that the degree of human intervention, often in the service of business interests and consumerism, is actually making our earth less rich and beautiful, ever more limited and grey, even as technological advances and consumer goods continue to abound limitlessly. We seem to think that we can substitute an irreplaceable and irretrievable beauty with something which we have created ourselves.

Note the Pope's awareness of how human impacts may make it harder to leave nature alone, pulling us further into an Anthropocene epoch of increased ugliness and diminished diversity. In Francis' view, excessive human intervention in the natural world doesn't just lead to negative consequences—it is itself a negative aspect of current human societies. We don't just need *better* interventions in wild nature, we also need *fewer* interventions, and more respect for the complex, beautiful world that God has created and nature has evolved over the aeons.

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Laudato Si' goes on to clearly identify the driving cause of biodiversity loss and our other global environmental problems: an economic system out of control, not focused on providing sufficient goods for people to live good lives, but devoted to the relentless and ever more intensive commodification of all aspects of nature, in service to ever more consumption. Here the Pope, for all his idealism, demonstrates a more realistic understanding of the powers blocking the creation of ecologically sustainable societies than many environmentalists. Minor reforms to this system, even major efficiency improvements within it, will never allow us to solve our environmental problems, Francis avers. Partly, this is because:

191. ... environmental protection cannot be assured solely on the basis of financial calculations of costs and benefits. The environment is one of those goods that cannot be adequately safeguarded or promoted by market forces. Once more, we need to reject a magical conception of the market, which would suggest that problems can be solved simply by an increase in the profits of companies or individuals. Is it realistic to hope that those who are obsessed with maximizing profits will stop to reflect on the environmental damage which they will leave behind for future generations? Where profits alone count, there can be no thinking about the rhythms of nature, its phases of decay and regeneration, or the complexity of ecosystems which may be gravely upset by human intervention. Moreover, biodiversity is considered at most a deposit of economic resources available for exploitation, with no serious thought for the real value of things, their significance for persons and cultures, or the concerns and needs of the poor.

What is needed is no less than the taming of modern industrial capitalism: harnessing the Economy in service to higher goals, rather than letting it pursue its own logic of growth at any cost and in the process run roughshod over wild nature and human beings alike (Daly, 2015). This is not to forego human development, Francis insists; it is instead its prerequisite, in a crowded world with limited resources. In this context, the Pope invites his readers to rethink what we mean by development and to consider whether sometimes “less is more,” particularly regarding resource use among the wealthy:

192. ... a path of productive development, which is more creative and better directed, could correct the present disparity between excessive technological investment in consumption and insufficient investment in resolving urgent problems facing the human family. It could generate sensible and profitable ways of reusing, revamping and recycling, and it could also improve the energy efficiency of cities. ... Such creativity would be a worthy expression of our most noble human qualities, for we would be striving intelligently, boldly and responsibly to promote a sustainable and equitable development within the context of a broader concept of quality of life. On the other hand, to find ever new ways of despoiling nature, purely for the sake of new consumer items and quick profit, would be, in human terms, less worthy and creative, and more superficial. 193. In any event, if in some cases sustainable development were to involve new forms of growth, in other cases, given the insatiable and irresponsible growth produced over many decades, we need also to think of containing growth by setting some reasonable limits and even retracing our steps before it is too late. We know how unsustainable is the behaviour of those who constantly consume and destroy, while others are not yet able to live in a way worthy of their human dignity. That is why the time has come to accept decreased growth in some parts of the world, in order to provide resources for other places to experience healthy growth. ...

Precisely here, in its willingness to consider setting limits to economic growth, the Pope's encyclical has provoked criticism from pro-business commentators around the world (Brooks, 2015). The guardians of the global capitalist status quo expect world leaders to occasionally pay lip service to combatting climate change or preserving

endangered species. But to question the goodness of growth is to question the real God that humanity bows down to in our times. Nevertheless, Francis asks his readers to rethink their most fundamental priorities in search of a truer understanding of the purpose of economic life:

194. For new models of progress to arise, there is a need to change models of global development; this will entail a responsible reflection on the meaning of the economy and its goals with an eye to correcting its malfunctions and misapplications. It is not enough to balance, in the medium term, the protection of nature with financial gain, or the preservation of the environment with progress. Halfway measures simply delay the inevitable disaster. Put simply, it is a matter of redefining our notion of progress. A technological and economic development which does not leave in its wake a better world and an integrally higher quality of life cannot be considered progress. ...

Of all the lessons conservation biologists might take away from *Laudato Si'*, this willingness to engage in fundamental socio-economic critique might be the most important. For the Pope is right: the Economy and its most powerful actors, multinational corporations, must be tamed in order for conservation to succeed—difficult and daunting as such a goal might seem. Otherwise, they will surely tame and displace the wild world that we seek to preserve.

Again and again, the Pope returns to the notion of limits: limits to how much people should consume (paragraphs 27, 161); limits to how much we should modify natural and cultural landscapes (106, 143); limits to how much wealth and how many possessions we need to truly be happy (220ff.). As one representative passage puts it: “The time has come to pay renewed attention to reality and the limits it imposes; this in turn is the condition for a more sound and fruitful development of individuals and society ...” (116). And further on: “We need to take up an ancient lesson, found in different religious traditions and also in the Bible. It is the conviction that ‘less is more.’ A constant flood of new consumer goods can baffle the heart and prevent us from cherishing each thing and each moment. ... Happiness means knowing how to limit some needs which only diminish us, and being open to the many different possibilities which life can offer” (222–223).

These words get to the heart of Pope Francis' message. An appreciation of limits is not a hindrance to human development, but it's prerequisite. Conversely the endless growth economy, grounded in greed, intemperance and ingratitude among individuals and on a relentless commodification and transformation of the natural world on the part of businesses, will inevitably undermine both human and non-human flourishing (Dilworth, 2009). No amount of efficiency improvements or techno-fixes can save nature, or us, in the absence of love and appreciation and a willingness to forego the pursuit of “more.”

If we can develop ideals of human development that include an appreciation for what we have and a sense that “enough is enough,” human beings can pursue our own flourishing while also acknowledging limits: even embracing them, as proof of our love for our fellow men and women and for the natural world (Alexander, 2015). If we can do this, we can leave forests standing and coral reefs thriving, and avoid adding the evil of mass extinction as an indelible stain on our career on Earth. *Laudato Si'* offers hope that humanity can indeed take this nobler path. Conservation biologists would do well to study and, where justified, advocate for Pope Francis' bold suggestions regarding the way forward.

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