

Laudato? Sì!

An environmental engineer reads Pope Francis

Paul L. Younger

On thoroughly reading the latest papal encyclical, the first thing that struck me was the complete mismatch with what I had been led to expect from the initial media coverage – not least in the Catholic press. Clearly most of the early commentators on *Laudato Sì* had simply not read it. This is hardly surprising, as the main text comprises 177 pages of richly-referenced arguments that defy speed-reading. Shameless as ever, the pundits poured forth their instant uninformed judgements. The most common misrepresentation of the encyclical – as much by its admirers as by its detractors – was that it was “on climate change”. Textual analysis tells a different story. Here is a breakdown of usage frequency for the most common technical terms found in the text¹:

environment (158 times); life (112); poverty / poor (73); ecology (69); biodiversity / species / animal / plant (66); earth (58); land /soil (45); pollution (40); water (45); waste (28); consumerism (23); sustainability (22); lifestyle (21); climate (14); urban (11); air (9).

This breakdown speaks eloquently and accurately for itself.

Far from focusing on a single issue, the encyclical holistically addresses the great global sustainability challenges of our times, discussing these under five headings: pollution and climate change; water; biodiversity loss; human quality of life; and global inequality. It happens that I have dealt professionally with all these topics over the years, at least to some extent, so I am well-placed to assess their verisimilitude. I can report that Pope Francis has done a very good job of summarising many of the principal challenges that we must collectively face. There was no point at which I thought “oh no, he’s got the wrong end of the stick”. Sure, there is the odd minor point which seems to receive undue emphasis, such as the disapproving comment (n. 55) about the “increasing use and power of air-conditioning”; why not say the same thing about heating in northern countries? It is not until much later (n. 180) that the real point at issue here is properly addressed, where Francis encourages “the construction and repair of buildings aimed at reducing their energy consumption and levels of pollution”; it is extravagant and unnecessary use of energy that is sinful, not the impulse to keep the human body within a tolerable temperature range.

One specific point which has been criticised by the few neo-liberal commentators who got that far into the text (n. 30) is Francis’ hostility to the privatisation of water services. His principal argument – which he emphasises in italics - is that “*access to safe drinkable water is a basic and universal human right, since it is essential to human survival and, as such, is a condition for the exercise of other human rights*”. Francis is clearly aware of the disastrous attempts to privatise the water

¹ The count excludes repetitive occurrences in titles and footnotes, and for each word given it also includes adjectives / adverbs etc derived from them.

utilities in Bolivia, which ended in a popular uprising (if you've never seen the 2010 film *Even the Rain*, watch it and you will immediately understand where the first Latin American pope is coming from on this issue).

Few of the points Francis makes are new. In the Catholic tradition, the same ground was first covered nearly thirty years ago by Sean McDonagh (*To care for the Earth: a call to a new theology* (1986); *The greening of the Church* (1990)) and more recently with great profundity in various reformed traditions (e.g. Alister E. McGrath *The open secret: a new vision for natural theology* (2008); Robert S. White (editor) *Creation in crisis: Christian perspectives on sustainability* (2009)). Clearly Francis has been pondering these issues for many decades too. The principal non-papal source cited by Francis is a book by Fr Romano Guardini (1885 - 1968), *The End of the Modern World*, which was first published in 1950. Fr Guardini took a courageous stand against Nazism, which temporarily cost him his academic post. As such, he was understandably sceptical about the expansive claims of technocratic modernism.

Francis clearly believes that the same technocratic modernism still holds total sway today. From my own experience as an engineering researcher heavily engaged in public debates about what is technically achievable in decarbonisation of energy, I would say that we are now in just as much peril from a post-modern rejection of the foundations of the scientific method. This is the attitude that lies behind parents declining to have their children vaccinated for fear of “chemicals”, even as crippling childhood diseases begin to spread again. It is also behind many of the absolutist refusenik positions adopted in relation to energy technologies, despite abundant scientific appraisal of their pros and cons. At its most extreme, this post-modern rejectionism leads to misanthropic ecological advocacy by (as Francis puts it) “those who view men and women and all their interventions as no more than a threat, jeopardizing the global ecosystem, and [who] consequently [argue that] the presence of human beings on the planet should be reduced and all forms of intervention prohibited” (n. 60). It is this sort of “green fascism” that recently got me a death-threat for publishing a research paper that quantifies the maximum possible vibrations due to shale gas fracking, which reveals that proposed rules governing that activity are 40,000 times stricter than those used for quarry blasting. It also prompted the comments of ecologist Dr Patrick Moore that Greenpeace (of which he was a co-founder) has now become an “evil organization”, as it has gradually abandoned both its respect for science and for its original humanitarian principles. To augment Guardini's prescient warnings on technocratic modernism, therefore, I would warmly commend to Pope Francis the writings of Terry Eagleton (e.g. *The illusions of postmodernism* (1996) and *After theory* (2003)).

For myself, as a Christian who has spent his entire career attempting to conjointly address poverty and environmental degradation, this encyclical is liberating and empowering. It comprehensively legitimates the efforts so many Christians have been making throughout my lifetime to expand our engagement with the woes of the industrial world (first taken up by the papacy in *Rerum novarum*

(1891), and greatly catalysed by *Populorum progressio* (1967)) to embrace the devastating ecological consequences – however unintended – of the global rush to unbridled consumerism.

Like all great apostolic initiatives, *Laudato Si'* is a radical call to conversion: in this case to “ecological conversion” in which our encounter with Jesus is realised in a “vocation to be protectors of God’s handiwork” (n. 217). This “entails gratitude and gratuitousness, a recognition that the world is God’s loving gift, and that we are called quietly to imitate his generosity in self-sacrifice and good works” (n. 220). However, personal conversion is insufficient: the “problems must be addressed by community networks and not simply by the sum of individual good deeds” (n. 219). Yet “on many concrete questions, the Church has no reason to offer a definitive opinion; she knows that honest debate must be encouraged among experts, while respecting divergent views. But we need only take a frank look at the facts to see that our common home is falling into serious disrepair. Hope would have us recognize that ... we can always do something to solve our problems” (n. 61). That’s clearly a mission to which a Christian environmental engineer can contribute.

Paul Younger FEng holds the Rankine Chair of Engineering at the University of Glasgow, where he is also Professor of Energy Engineering. He was formerly Pro-Vice-Chancellor for Engagement and founder-Director of the Institute for Sustainability at Newcastle University. He has worked extensively with community groups on water well projects in Bolivia, and on remediation of mine water pollution worldwide, and is currently helping develop large-scale renewable energy systems in Ethiopia.