# The Vatican and Artificial Intelligence: An Interview with Bishop Paul Tighe

## Brian Patrick Green

I FIRST MET BISHOP PAUL TIGHE, Secretary of the Pontifical Council for Culture,[1] in April of 2019, when he came to Santa Clara University for a meeting of Chinese and Western scholars on the topic of AI. Since then, he and I have worked together on two main projects: gathering scholars at Catholic universities to discuss topics involving AI and gathering Catholic leaders in technology who are trying to help AI be developed and used ethically. Bishop Paul Tighe is one of the leading figures at the Vatican when it comes to AI. This interview was conducted in mid-December of 2021. It provides a snapshot of the Vatican's activities related to artificial intelligence at this particular point in time. Conditions are changing rapidly. The interview should be read as light-hearted, at times humorous, yet also serious (Bishop Tighe has an Irish gift for that mixture). It has been edited for clarity and length; footnotes have been added to provide further information.

**Brian Green:** Bishop Paul, thank you so much for taking the time for this interview. Just to start, could you say a little bit about how the Vatican and Pope Francis became interested in artificial intelligence and why the issue has become as significant as it now is.

**Bishop Tighe:** I would say, first, that the Vatican and Pope Francis are two separate questions. The Vatican probably became alert to the importance of AI through a series of small conversations called the Minerva Dialogues, involving a number of people from Silicon Valley. These have been going on for about six years and were the first thing that really raised the topic with Vatican people in a serious way. A range of different people from the Vatican were present for those first discussions with people from Silicon Valley, and that primed the interest of the people working in the then-Pontifical Council for Justice and Peace, which became the Dicastery for Promoting Integral

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[1] For further information, see "Secretary," *Pontifical Council for Culture* website, www.theologia.va/content/cultura/en/organico/tighe.html.

Human Development. They actually just had a seminar which considered these issues.[2]

A number of people from the communications area, where I worked at that time, also attended those early meetings, and also a few people connected with some of the pontifical universities around Rome. I think it is fair to say that probably some of the work we had been doing in communications, where we got the Vatican moving into the area of digitalization, also had an impact. Communications people have traditionally represented the Vatican at the Internet Governance Forum (IGF) and the International Telecommunications Union (ITU) where these issues were surfacing. Additionally, when attending conferences like the Web Summit[3] and South by Southwest[4] people there were very clearly articulating that the next big thing to be thinking about and reflecting on was AI and its impact. At the same time, the Secretary of State, which represents the Vatican at a number of international organizations, saw that AI was also suddenly appearing on the agenda for everything from the IGF and ITU to UNESCO and the Council of Europe. So, AI-talk was rippling around without a clear focus.

Secondly, Pope Francis was approached by a number of ethically-minded business leaders from Europe who were very alert to the emerging issues around AI. The Pope was aware that the Council for Culture was interested in these questions, and he asked me to follow up on those initiatives. That has led to the emergence here of the Center on Digital Culture. AI also featured in conversations between the Pope and global leaders, and particularly at the time of the visit of the Secretary General of the United Nations, about two years ago, AI was an issue of particular attention. But the Vatican is not the most coordinated administrative unit, so different people were doing different things, and that is still to some extent what shapes reality.

One instance, I think, very autonomously and correctly took up the issue: the Pontifical Academy of Sciences. Chancellor Marcelo Sanchez Sorondo was encouraged to do so by the scientific members of the Academy. They began to have a number of high-level

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[2] Dicastery for Promoting Integral Human Development, "New Technologies for Peace and Integral Human Development," December 9, 2021, www.youtube.com/watch?v=3BJl-XnJ5DI.

[3] Marian Goodell, Bishop Paul Tighe, and Jessi Hempel, "Preaching to the Converted," *Web Summit 2016*, www.youtube.com/watch?v=qVuvDzgx3sc&t=45s; for the news angle, Kim Hjelmgaard, "Preaching to Facebook Faithful: Vatican Looks Past the Pulpit to Social Media," *USA Today*, Nov 7, 2016, www.usatoday.com/story/tech/2016/11/07/web-summit-lisbon-technology-vatican-religion-social-media/93412358/.

[4] Michel Martin, "The Vatican Sends Its Social Media Guru To SXSW Festival," *All Things Considered, NPR*,
March 19, 2017, www.npr.org/2017/03/19/520752765/the-vatican-sends-its-social-media-guru-to-south-by-southwest-festival.

conferences whose proceedings are accessible on their website.[5] Very interesting people like Stephen Hawking were present for some of these discussions. This Academy, however, is more of a consultative body and tends not to take an executive function.

Here at the Pontifical Council for Culture we began to take a formal look at AI during our 2017 Plenary Assembly, where we had a conversation about artificial intelligence and how it relates to anthropological issues.[6] We decided we should work together with the Dicastery for Promoting Integral Human Development, and the most visible initiative ensuing from this collaboration was the conference held in September of 2019: "The Common Good in the Digital Age."[7] We have also responded to a number of invitations to partake in seminars. If you remember, the first time we met was when Georgetown University organized the seminar at Santa Clara University in April of 2019 bringing together Chinese and Western scholars to discuss AI, philosophy, and religion. Now while this seminar was not organized by the Vatican, but Georgetown University, I and Antonio Spadaro, SJ, were there, so it was a somewhat informal encounter.

Another big instance I know of would be the Congregation for Catholic Education. Through their work with the universities, they had an alertness and concern regarding AI; so that was a topic on their radar. The Pontifical Academy for Life also broadened beyond the traditional life issues like euthanasia, abortion, genetic research, etc. and began to take up the questions of robotics and artificial intelligence. They took on a very major initiative partnering with IBM and Microsoft: The Rome Call for AI Ethics.[8]

I think that what is probably needed now, and which I hope to see emerge, is that the Secretary of State, which is in many ways the central policy office of the Holy See, will try to coordinate and bring together all these players, and together with them will work at

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[5] For example, see the following conferences: Pontifical Academy of Sciences, "Book Launch: Robotics, AI, and Humanity. Science, Ethics, and Policy," March 26, 2021, www.pas.va/en/events/2021/robotics_launch.html; Pontifical Academy of Sciences, "Robotics, AI, and Humanity: Science, Ethics, and Policy," May 16–17, 2019, www.pas.va/en/events/2019/robotics.html; Pontifical Academy of Sciences, "Power and Limitations of Artificial Intelligence," November 30–December 1, 2016, www.pas.va/en/events/2016/artificialintelligence.html; and Pontifical Academy of Sciences, "Big Data and Science: Relevance of Computational Sciences for Data Collection, Data Storage, and Data Management in Basic and Applied Scientific Investigations," November 16–17, 2015, www.pas.va/en/events/2015/bigdata.html.
[6] Pontifical Council for Culture, "Plenary Assembly—2017 Future of Humanity," November 15–18, 2017, www.cultura.va/content/cultura/en/plenarie/2017-Future.html.
[7] Dicastery for Promoting Integral Human Development (DPIHD) and the Pontifical Council for Culture (PCC), "The Common Good in the Digital Age," September 26–28, 2019, www.digitalage19.org/.
[8] Pontifical Academy for Life, Microsoft, IBM, FAO, and Italian Ministry of Innovation, "The Rome Call for AI Ethics," Rome, February 28th, 2020, www.romecall.org/.

articulating a consistent policy which can shape the Vatican's response in different areas and for different international meetings and situations. For me, that would be a priority. I think we may also be at the stage where we could begin to work towards what the outline of an eventual intervention in this area would look like. I'm not talking encyclicals or anything. You first have to build yourself up. There are obvious themes more easily grasped in terms of Catholic social teaching: questions about work, the future of work, questions about bias and inequality.

And there are the Pope's concerns in *Laudato Si'* about the technocratic paradigm, which involves the risk of technology and the sense that while dual use is important, technology has its own capacity to change people, to change culture. Technology may be born of a particular culture and bring certain values and presumptions with it … and maybe some of those have to be changed. So, I think what you get here is that it is an emerging space, obviously an issue that cuts across many different points of view. What we are hoping and beginning to see is the emergence of a more coordinated position which has become necessary as the Vatican engages with international organizations.

**Brian Green:** Thank you for that comprehensive overview. You mentioned the Minerva Dialogues and the work of Father Eric Salobir, OP. I think I first talked to Fr. Eric back in 2014 or so. He has been active in this arena for a long time.

**Bishop Tighe:** Yes, he has been very significant by becoming a bridge, putting some of the people from industry in contact with the Vatican. Eric continues to be able to "walk in both worlds"—the Church and the tech sector—with real credibility. The Human Technology Foundation, of which he is the President, has also played a very important role in building networks of relevant stakeholders.[9]

**Brian Green:** Following up on that, what are some of the different perspectives within the Vatican on AI? Because obviously some people may be pro-technology, some people may be anti-technology, some may be more engaged, and others not be interested at all.

**Bishop Tighe:** One of the perceptions of the Council—our approach—is that the real expertise we are looking for will be found globally. We have a very privileged reservoir of knowledge and reflection in Catholic universities. One of our desires would be to tap into that creative network and serve as a kind of hub. So, we want to have an alertness and awareness of who the people working in the field are, who would be resources for the Vatican in shaping its thinking. For example, our work with you and other scholars….

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[9] See the Human Technology Foundation website: www.human-technology-foundation.org/.

**Brian Green:** In fact, many of the people contributing to the present issue of the *Journal of Moral Theology* are involved in these academic dialogues.

**Bishop Tighe:** Exactly. Getting at your question, I would say there is a mixture within the Vatican. When I worked previously in the digital space, particularly in communications, one of the hardest things was to get people in the Vatican to take the digital seriously. A whole process of learning had to happen in order for people to understand that these are very important spaces in which the Church needed to be present. For one thing, we had to overcome a tendency to make a distinction between the "real" and the "digital," as if the digital were somehow secondary or less important or not serious. I am not sure if that was a kind of resistance to technology as much as it was a reflection of the age profile of many of the people with whom I worked. Italy itself has retained to a greater extent the significance of newspapers and TV stations relative to the internet, unlike what has happened in some other parts of the world. Then there also is a set of people, as we know, responding more to a science fiction version of AI, rather than to a grounded understanding of what AI is. But I would say people who have been drawn into these discussions have, by and large, been engaging with it in a more nuanced way. So, I do not find that there are some who are more in favor and some who are less in favor, but it might be there are some who more strongly recognize the inevitability of what is coming.

I think there is a concern as to where governance and regulation will emerge from. Over the last couple of years, the Vatican generally has been concerned about the loss of authority suffered by some international organizations. The Vatican has always been a big supporter of the need for international organizations and attentiveness to global issues. AI would be a kind of starting point issue for who is going to decide, because it is happening much more in the commercial arena than in national governments and universities.

Some of the issues about which we are all able to get on board very immediately are, as I said before, work, inequality… things that fit our categories. But I surmise that the really interesting thing AI is doing is to incite us to think again about what makes us human. What are the values that make us human? We have to become, in terms of anthropology, much more alert to thinking about what to be human is, and we have to do that in a way that is more global, because the ethical issues have to be addressed in a global context. The global context is also very pluralistic in terms of different religions, no religion, different belief systems, and different political systems. So, what are the basics? The deeper issue the Vatican is interested in is: "How do we think about what it means to be human?" How does that help us reflect on which values would be imperiled by wrong forms of AI?

I think the Vatican is also following and listening to the secular debates and learning a huge amount from those, because many of the basic concerns raised in even quite secular contexts are issues to which we can relate—concerns about bias, privacy, inclusivity, etc. It is a very welcome attempt by people to ensure that AI and the potential of AI would be put in the service of humanity. We have seen some of the language used: words like "human centric" and phrases like "the true measure of progress will be whether AI serves humanity." Great. These are all categories that happen to be very strong in Catholic social teaching. I think what also is coming interestingly into the debate is that as more and more people within the technology side begin to reflect on ethics, they are moving towards a more sophisticated understanding of what it means to reflect on ethics and our understanding of what to be a human person involves.

Also, a lot of the thinking in *Laudato Si'* on the use of technology provides an immediate framework for thinking about AI. I do not think *Fratelli Tutti* has gotten the attention it merits. A lot of people talk about needing global solutions for AI because we have to recognize the interdependence of people. But *Fratelli Tutti* moves beyond *de facto* interdependence and tries to speak of a broader and richer conception of relationality between people, and of solidarity. So, I think there is a place for us where we can speak language and bring insights that will deepen some of the more secular claims. And that is great.

From Pope Francis, one chapter that I am really determined to spend more time on is Chapter Six of *Fratelli Tutti*, where he talks about truth and consensus. He is here, in a sense, challenging the unarticulated relativism still quite dominant in a lot of people's intuitive approach to ethics. He is not challenging in an imperialistic or territorial way, but taking some of the traditional elements of natural law theory and trying to broaden them—e.g., How do we think about what it means to be human? What are the values that promote human flourishing for individuals and society? How do we think about those in a more inclusive way, not simply informed by our Western tradition, not simply including male perspectives? And so on.

It is a bit like the efforts to make AI ethical by design: it is not going to happen accidentally. I think the Pope's huge contribution there is that he talks about searching for truth and the importance of consensus in searching for truth, while at the same time making a claim that it is not consensus that creates the truth: truth has a value, a worth, and a standing of its own. His intuition is that it is a more consensual dialogical approach engaging all different perspectives that will allow us to begin to articulate values, intuitions, actions, and approaches valid for all human persons.

At a certain point he talks about the human rights tradition. The human rights tradition is one of the great achievements of humanity and the global order. We disagree on so many things, but we do have

the achievement of having put certain "no's" out there, certain things that should not be permitted if we want to promote human dignity. A Christian perspective will offer one way of rooting it, a humanist perspective will offer another. These can be mutually complementary, I think. As we try to move towards global statements about AI, we may end up being more limited in our expectations and settle for excluding the negative; maybe it will be clear what AI should not be used for. Often the real ethical or moral challenge is: "How do I find the more positive ways of thinking about it and using it?"

**Brian Green:** You have gotten into several questions I want to get back to again, but first I do want to ask the following question, because you have found a great segue. When we consider the Church's thinking about AI and its role and human society, can you say anything about how that fits into the context of the Church's historical approach towards technology?

**Bishop Tighe:** To be honest, often when the Church reflects on technology there is a recognition of the great things that technology has achieved. And yes, there's a celebration of the advances that have really represented enormous progress for the world. Since Vatican II, there certainly has been a desire for the Church to express more recognition for the things it received from the world; technological and scientific achievements exemplify that. However, I would still say a lot of Church documents are a bit quick, then, to add the "but" which can hide the fact that the better articulations of Catholic theology actually allow for a positive evaluation of science and technology, understanding that we were made in God's image and likeness. Part of being made in the image and likeness of God is our intelligence, our capacity to innovate, understand and shape the world in ways that make it better for more people. From the theoretical understanding of Catholic anthropology this does not present difficulties for us. God can be at work here. The Pope did say that the internet is "a gift from God" because it is something that gives us the potential to realize our desire for closeness and communication.[10]

So, it is good to have a positive framing around these discussions of technology. What I think is more worrying is that, despite the Church's efforts to speak positively about science and technology, there is a perception, not just among some scientists, but culturally, that somehow there is an opposition. As I spoke before about the Pope looking for this more dialogical inclusive approach to finding solutions to human problems, I think one of the pressing issues to address—and it is in *Laudato Si'*—is the need for a really good dialogue

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[10] Pope Francis, "Message for the 48th World Communications Day: Communication at the Service of an Authentic Culture of Encounter," *Vatican website*, June 1, 2014. www.vatican.va/content/francesco/en/messages/communications/documents/papa-francesco_20140124_messaggio-comunicazioni-sociali.html.

between the world of science and the world of faith. The debate between the two is almost like a diplomatic process. There needs to be initial gatherings working on shared points of agreement, where you build the confidence and trust in each other that then allows you to raise the more difficult issues. So, it is not done from the perspective of defensiveness. We also need to be aware of how that is handled by media. I mean "the Church condemns…" is an instinctive journalistic headline.

One thing we always tried to keep very clear when we were working on, for example, an articulation of a response to the internet: keep the positive first. Because "Vatican Condemns Internet" was the headline we wanted to avoid. What we tried to say was "Vatican praises potential of internet," and then the negative is the failure to realize the potential, rather than the starting point. There was an Irish author who began one of his stories concerning Catholicism by saying: "In the beginning was the word, and the word was 'no.'"[11] A more suitable strategy is to try and name the "yes," which may then lead you to a "no," for certain things. For example, I want to say "yes" to human dignity; therefore, I am concerned about anything that drives inequality. There is the vision, there is the value, and then there is the norm, and the norm is often phrased negatively. We should never expose the norm without also trying to show the vision that is leading to it. That vision may be widely shared, because I do not think anybody wants to develop things that are harmful to people and destructive to society.

**Brian Green:** I agree that presenting the positive vision is really important. You started getting into the diplomatic side of AI, and I just wanted to touch on that. As you mentioned, the Church is very interested in supporting international institutions. How would you say the Church's approach to AI relates to its historical approach towards international institutions?

**Bishop Tighe:** I think one of the things that the Church still has, despite all the difficulties, is an extraordinary convening power. We see this if we organize things and invite speakers. There is extraordinary goodwill and willingness of people to come to events we organize. Some of the people who come here from Silicon Valley, for example, want to see the Vatican because they are fascinated by its strangeness. I can think of one event we did recently with the German embassy to the Holy See. We had a one-day seminar looking at AI and its implications for how we think about what it means to be human and how we relate to each other in society.[12] The seminar was intended not

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[11] Brian Moore, "A Vocation," in *The Dear Departed: Selected Short Stories* (London: Turnpike, 2020).

[12] Botschaft der Bundesrepublik Deuschtland beim Heiligen Stuhl and the Pontifical Council for Culture, "The Challenge of Artificial Intelligence for Human Society and

necessarily for specialists, but for policymakers in governments, embassies, and within the Church. Just put the question on the agenda.

We were able to invite, as you know, Jim Keenan, SJ, a leading moral theologian, Christof Koch from the Allen Institute in Seattle, a high-profile neuroscientist, and Matthias Lutz-Batchmann, a philosopher who holds the Chair previously held by Jürgen Habermas.[13] We had the head of the Human Rights Agency of the European Union, the senior European representative of the IEEE and an ethics teacher from Angelicum University. They all said: "This is great! We usually go to seminars where we meet others who are like us. Here we meet different people." One of the things the Vatican can do is to convene people, offer a place where, maybe, they can feel freer and can have a new conversation. The Vatican can be diplomatic. What makes that easier for us is that we are not racing to be a world power here. We do not have a horse in the race. We do not have a strong commercialization interest. Nor do we in any way have a monopoly on concern for humanity. But we are concerned for humanity: that is our only real interest. We can offer a forum and a place that maybe can bridge gaps, where maybe there is not the same historical distrust.

**Brian Green:** Right, it naturally has a different dynamic to it because it is the Vatican, rather than another organization.

**Bishop Tighe:** Yes, and I think the other thing is that the Vatican commands huge attention, but it may be a very small reality in the end. When we do things, we get often far more attention than the thing necessarily merits, which means we have to use that capital well. In particular, I think we have to use it to be a model for local churches. I remember when Pope Benedict first got onto Twitter. It was not a major technical achievement, but it got huge global attention. It signaled to people that this is something the Church should be thinking about. It gave communications people in dioceses around the world leverage to say to their bishop: "Oh, the Pope is on Twitter, maybe we should be too." It had symbolic power. There is probably a strength to all the different approaches and initiatives and the lack of cohesion at times, because maybe we reach more places. There is an alertness and awareness that the Vatican is interested in helping as it can by offering the fruits of our tradition.

**Brian Green:** I think that is a point worth pondering: the symbolic and the leadership aspect of what the Vatican does. I want to move a little bit more into AI issues in particular now. At a general level, what

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the Idea of the Human Person," October 21, 2021, www.cultura.va/content/cultura/en/dipartimenti/com-linguaggi/AI.html.

[13] For Keenan's take on the event, see James F. Keenan, SJ, "7 Lessons Learned from the Vatican's Artificial Intelligence Symposium," *National Catholic Reporter*, Nov 2, 2021, www.ncronline.org/news/opinion/7-lessons-learned-vaticans-artificial-intelligence-symposium.

do you think are some of the most important issues to address when it comes to artificial intelligence; for example, you have mentioned bias, inclusion, and labor. What is the Church doing to address these issues and what more do you think could it do?

**Bishop Tighe:** I think the first thing—and this is me going back to my moral theology again—is that the Church has to promote a sense of ethics as an accessible discipline and take away the mystery. Ethics is not the same thing as law or positive law. Ethics is not something that comes down from God handed conveniently to you. Ethics is a method. We need to create a sense of interdisciplinary requirements for ethics; no ethicist can really speak on an issue without first understanding the issue itself.

AI is such a complicated issue that what ethics has to do is to provide a framework and a language allowing different disciplines to talk to each other and understand each other's concerns, in order to be able to determine what is actually going to be best for human beings. I know this sounds like a pretty theoretical concern. One of the ways to do this is to indicate some specific projects we would try to address using AI, projects we all clearly agree are a benefit to humanity. We learn together from that. Maybe it could be trying to develop AI to address certain ecological concerns or issues around migration. The issues are important in themselves, but we do them as a self-consciously collaborative project between people from different disciplines, so we learn to speak to each other and maybe learn to work together as well.

**Brian Green:** I like the future-oriented aspect of that too, regarding what the Church could be doing. Are there clear paths forward for that sort of engagement, or do you think that is something where the groundwork is still being laid?

**Bishop Tighe:** Well, the nearest thing I can think of is probably Eric Salobir's "Vatican Hackathon" initiative. He brought groups of very, very talented students from across the US who came to Rome and worked on different projects.[14] I remember seeing one very simple little project, where a group of students were using digital tools to help people in refugee camps communicate their healthcare needs. It was a very simple project, from there it could have had an AI dimension that would learn from the responses, develop diagnostics, etc. Doing something together clearly was the important part. And then the opening out of the listening, and how that was perceived by the people in whose name you were doing it.

Once again, I think of Pope Francis continuously asking: "How do we ensure that AI will be put in service of the human good?" And that

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[14] Devin Watkins, "First Vatican Hackathon Seeks Solutions to Real Problems," *Vatican News*, March 8, 2018, www.vaticannews.va/en/vatican-city/news/2018-03/first-vatican-hackathon-seeks-solutions-to-real-problems.html.

we are not just talking to people with certain levels of education and with certain types of vocabulary? No matter how inclusive we try to be, in terms of deliberately trying to get different voices, there is always that risk. How do we ensure that we are also listening to those whom we may be inclined to perceive as the passive recipients of our largess, as if we know what is good for them? How do we get to really listening to and engaging with people who will otherwise have their lives impacted without having a say?

**Brian Green:** Yes, the dialogic elements are very important. At a deeper level you have already talked a little bit about the anthropological and theological aspects of AI, or rather, the questions that AI raises that are anthropological and theological. Can you say a little bit more about that? Because I think those are some of the deepest issues the Church can speak on.

**Bishop Tighe:** By training I am not terribly speculative, but I think there are a couple issues here. I trained first as a lawyer, and then came into ethics, so mine is a certain problem-solving approach. I do think that in terms of our anthropology there are a number of insights we have to bring to the table. One is our understanding of human beings as being embodied. We should overcome any kind of dualistic thinking here, which I think very easily emerges with AI, and makes us wonder "well, if AI could be intelligent, then it is 'human,'" as if intelligence is really what makes us human. Whereas human intelligence itself is something that has a very clear material substratum in terms of our bodies, and the complexity of that we are learning to appreciate. To do AI well, it has to take into account the biological and the integration of the biological. I mean some of the stuff you read about, like uploading intelligence and memories onto some sort of computer—and I know it is more speculative than anything—is heading off into a dualistic way of thinking right away and should be avoided. I think we need to keep alive that sense of the importance of our body, and not moving towards abstraction. There are all sorts of ways that is in play. I would recommend a reading of Mark O'Connell's *To Be a Machine* in this context.[15]

Second, I think a related issue is our understanding that people are social by nature, not just social by compromise—in other words, the idea that the only reason I am social is because it is in my own long term personal self-interest. Again, Pope Francis has been very strong about contesting this consumeristic understanding of what it is to be human. You and I were both present when Reid Hoffman, here at the Vatican [in 2019], very playfully said: "Look, startups never lose money by gambling on human sin" [paraphrase]. You can monetize

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[15] Mark O'Connell, *To Be a Machine: Adventures among Cyborgs, Utopians, Hackers, and the Futurists Solving the Modest Problem of Death* (New York: Anchor, 2017).

gluttony, lust, etc.[16] The truth is, one of the interesting things AI will do is to help us think about how determined we are in so many things we do. AI can actually say, with varying degrees of accuracy, how we are going to behave. On certain issues, I do not think that means we do not have freedom. I do think it does tell us something about our default selfishness and self-referentiality.

**Brian Green:** We are very predictable.

**Bishop Tighe:** Yes, and if you gamble on that you are more likely to be right than wrong. So how do we promote an idea of human solidarity? Because people talk about the emerging inequality—digitalization may have driven that—and the inequality is not just the enormous wealth of the few against the relative poverty of the many; it also is the access to power of the few against the lack of access to power of the others. Beyond that, there is the question: is there even a sense of shared destiny?

I mean, those to whom wealth is gravitating are interested in using it to promote, maybe, space exploration. I know you are interested in that,[17] and I can see what they are thinking there. But if it is about saving the best of the planet and sending them off to future worlds, rather than, say, the harder thing of having to address human issues here on Earth … the fact that it is easier to deal with the technological challenges is tragic. Who decides that huge resources go to one rather than the other? It is the question of common destiny and, relatedly: do we have that sense of human dignity?

I think there are ways in which AI will teach us to be more alert to the limitations of our freedoms, as it can predict patterns of behavior. But it will also raise huge challenges. For example, if it can tell in advance which men are likely to abuse women. If these men are identified, should we take preventive action? Or might we educate them in advance to help them recover their freedom? I think AI may teach us to be more humble about our understanding of the extent to which we

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[16] Where Hoffman states his thoughts at the Vatican: Vatican IHD, "Opening Session Part 2: The Common Good: Seeking Shared Values," from "The Common Good in the Digital Age" conference, Sept 26, 2019, uploaded to *YouTube*, Nov 14, 2019, time: 1:01:30-1:03:10, www.youtube.com/watch?v=2FYh_j3OBDg. Hoffman originally stated his idea here: "Reid Hoffman," *The Wall Street Journal*, June 23, 2011, www.wsj.com/articles/SB10001424052702303657404576363452101709880. For influence of this thought, see Robinson Meyer, "The Seven Deadly Social Networks: Every Crime against the Divine Will Has Its Own Corresponding Digital Brand," *The Atlantic*, May 9, 2016, www.theatlantic.com/technology/archive/2016/05/the-seven-deadly-social-networks/480897/. Finally, in 2021 he rethought, clarified, and revised his position to emphasize that impulses towards vice also need to be actively controlled and limited: Reid Hoffman, "Human Nature in Vices and Virtues: An Adam Smith Approach to Building Internet Ecosystems and Communities," *The Knight Foundation*, October 29, 2021, knightfoundation.org/human-nature-in-vices-and-virtues-an-adam-smith-approach-to-building-internet-ecosystems-and-communities/.

[17] Brian Patrick Green, *Space Ethics* (London: Rowman & Littlefield, 2021).

are free. It would be not so much about measuring the freedom that we have, but potentiating that to make good choices.

**Brian Green:** I like the positive framing you put there. We might appear to lose our freedom, but perhaps we can gain back that and more because we will know the truth.

**Bishop Tighe:** The whole topic of AI invites us to frame it that way. I mean I can understand why people are saying "'No' to AI making decisions about parole or bail." We know there can be inbuilt biases and that we can get it wrong. We should also know that the judicial system as we have it now may not be as good (effective) as even a semi-good AI system. We have to be careful not to project on humans this extraordinary achievement of all our potentials. We can maybe use AI to help us reflect on who we are and what we are, and understand our patterns of behavior, with the result of us then being able to use that knowledge to grow.

**Brian Green:** The next big question I was going to ask you is: are there relationships between AI and theology we should be thinking about?

**Bishop Tighe:** Twenty-five years ago, when some of the stuff on genetic enhancement was coming out, my mentor in the area of moral theology, Maurice Reidy, saw many people in the theological arena simply responding "Oh, you should not play God." Reidy would always retort: "No, you should play God." Our God is a God who created, who created with love and attention. When we begin to deploy these technologies, how can we use them for the good? In other words, we should be as attentive in our stewardship of creation as God was in the act of creation. So that was just to flip that traditional idea that you cannot play God. There are many decisions we have to make.[18] In broad terms, we are at a turning point with all the developments in nanotechnology, biotechnology, information technology, cognitive science, and genetics with AI increasingly driving said developments. These begin to combine together, and ultimately, we are talking about taking human evolution into our own hands. Now, maybe that is overstated, but that seems to be where technology is going, especially in the biological sector. If we begin to do this, questions emerge about the values that should shape it and who should decide.

I think literature can help here. For example, in Kazuo Ishiguro's *Never Let Me Go*, human beings are cloned so that their organs can be given to other people.[19] Ishiguro's question was, in the very beginning:

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[18] Maurice Reidy, Seminar for Geneticists, Holy Cross College, Clonliffe, 1995. See also Brian Patrick Green, "The Technology of Holiness: A Response to Hava Tirosh-Samuelson," *Theology and Science*, 16, no. 2 (2018): 223–28, where I make a similar point: we should imitate and seek—"play" at—God's holiness (via ethics) and not only "play" at God's power (via technology) or we will, in our unethical power, destroy ourselves.

[19] Kazuo Ishiguro, *Never Let Me Go* (New York: Vintage, 2005).

how did it happen? Because nobody ever wanted to be killing human beings for their organs. Well, what happened was that people wanted to address and cure particular illnesses. A good desire then became inhumane at the close. We need to pause and ask. Rather than let this happen by creeping, well-intentioned incrementalism, we need to initiate a conversation. Who can do that?

For theology, I think the challenge is to determine how we can share our theological insights and translate those into languages that people formed in other disciplines can actually appreciate. At the same time, how do we help people in other disciplines share their insights? I think it will become hugely important in terms of theological formation. We used to insist that people study philosophy before theology. Well now I think people need some awareness of science and technology in preparation for theology, if people are going to be adequately reflecting on our world.

**Brian Green:** I agree with that a lot. The natural sciences used to be called "natural philosophy," and they would have been part of the philosophy curriculum.

**Bishop Tighe:** Today, even in terms of images and metaphors, we cannot talk to people if we do not know them.

**Brian Green:** Exactly. The lack of comprehension becomes a communication problem. Returning to the anthropological side of artificial intelligence, for what else do you think AI might be significant? And [humorously], would you baptize an AI if it asked?

**Bishop Tighe:** Another important thing is the whole question of ontology. What is the nature of the being of an AI or a robot? As I mentioned previously, we had the neuroscientist Christof Koch at a recent seminar. He was very clear that AI and robots could performatively seem human, but he was very reluctant to ascribe any form of consciousness to artificial intelligences. In other words, you may end up believing you are interacting with a human, but ultimately, the question is: "Is it actually human?" I know you were not being overly serious about the question, but if I had an AI ask me to baptize it, I would not be inclined to.

In functional terms, an AI could participate in a sense of belonging, but I think it might be more akin to a family pet. That does not mean you will not develop feelings about it. I read somewhere that American soldiers expressed grief after robots they used to disarm bombs were damaged by the bombs, and they experienced a sense of loss. I think we need to maintain an ontological perspective rather than just a projection. The ontological issue remains important.

**Brian Green:** Ontology never goes away.… Moving onto more concrete issues, what teachings of the Church do you think are the most relevant when it comes to thinking about AI?

**Bishop Tighe:** At the risk of repetition, I think some of the Church's perspective on the incarnational dimension of our lives and

the bodiliness of being human are vital to remember. There is something about the body—"It is not so much that *I have* a body as that *I am* a body"—the old Merleau-Ponty quotation. This is critical. Some Catholic teaching, even in areas of sexuality, also becomes relevant here. In a lot of thinking out there the body is almost reduced to the carrier of the real person. The real person, therefore, is not dependent on the body and could be liberated from the body. I think incarnation and embodiment would be insights we need to bring to counteract the kind of dualism I think can emerge in a lot of thinking on AI. Other areas, more obvious and with immediate applicability, as I said before, are questions about inequality, unemployment, justice issues, and so on.

I think one further issue is something UNESCO highlights: our interactions with robots and AI—which exist almost exclusively to do what we want—could condition how we think about our relationships with real human people.[20] There could develop an expectation that they also exist solely to satisfy my needs. UNESCO was also beginning to look into the issue of the anthropomorphization of AI. I think there are a range of issues about which our Church teaching will have things to say.

**Brian Green:** Can you say something about what the Church's impact has been on issues related to AI? Have the conversations in which you have been involved turned into action in any ways?

**Bishop Tighe:** I am not sure anything has turned into direct actions, because I am not sure if the Church in that sense is an actor in the arena, as of now. If we wanted to distinguish a bit about the Church, I think the Church is not simply hierarchies, institutions, and professors of moral theology, it is also individual believers. Catholics, together with other people with different religious backgrounds, or people with no religious backgrounds but with developed ethical thinking, are trying to marry their principles with their work practices. Importantly, we have already seen people working in the AI arena say to the Church: "Help me think through the issues I am addressing in my day-to-day work." And they are beginning to work collaboratively among themselves. I am struck by this as a kind of embodiment of *Gaudium et Spes*, where it says that lay people cannot look to Church leaders for instant answers to every question (no. 43). They cannot expect it, but they can get support in terms of the analysis they can bring to reflect on their responsibilities.

We have a group of Catholic technology leaders in Silicon Valley working on these issues. So we ask: "How do we support and equip people working in the arena to be able to bring their values into

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conversation?" Not in a sectarian way, but to contribute to the overall purpose of the company, and try to ensure that AI will be in service of humanity: what is true, what is good, and so on. Because they are the ones who are there. In terms of practical things, in the discussions with secular Silicon Valley leaders, what has emerged is mutual respect and appreciation that people working in this field, at the development phase, have good intentions. They also have commercial and other intents, but they have fundamentally good intentions and they certainly are anxious not to do any harm.

From the other side (and they were the ones who did the inviting initially), I would say there has been a growing awareness that our tradition has insights into what it means to be human and what it means to live in society, relevant to them and their concerns. This dialogical context, as the relationship gets better and more mature, gradually allows for a more frank and open critique of one another's positions. A more robust discussion develops, and that is an achievement.

**Brian Green:** I do want to push a little bit more just, because I think most people have no idea these conversations are even going on in the first place. So, I wonder if you could give more specific details about some discussions in which the Vatican has been involved. Or if you could mention ways in which the conversation might have progressed because of the Vatican perspective, or things which might be unique to the Vatican's contribution, even if it is more conversational than active.

**Bishop Tighe:** The initial conversations with secular leaders tended to be very much centered around shared texts, which were essentially articles chosen by people from Silicon Valley, which they felt even people with no technical background would be able to read and gain a sufficient understanding of the issues. That educational purpose was there to begin with. A lot of discussions then were focusing in and around texts. To some extent that has remained the model, but the sophistication of texts has improved.

Equally, on the Vatican side, where there are quite a few academics, we found some very helpful ideas coming from Scholasticism and Thomas Aquinas. Some of us had to translate those ideas into terms more intelligible for the people on the other side! There was a lot of bridging, and learning each other's languages, and trying to understand, that has been enabled by the experience of working together, by the social dimension. A lot of really good conversations happen not so much at the table, where we have our fixed points of discussion and articles we are trying to follow and debate, but in the margins of those, where people raise questions and begin to express and explore ideas that maybe they would not take to the full table.

The fruits of that would be found in a conference like the one held in 2019, in being able to bring to the table at a Vatican conference people like Reid Hoffman from LinkedIn, Mitchell Baker from

Mozilla, and others. They were able to come and be part of a public engagement in that area. In the same way, there are other people, particularly Eric Salobir, who have been brought into much more corporate environments. Of course, there are more; this is not the only show in town.

As these conversations progressed, I also realized that we needed to tap into far wider Church sources, and that is where the Pontifical Council for Culture's Center for Digital Culture came from: an intuition that real knowledge and expertise and insight could be brought from a broader Church perspective. We decided to engage with people coming from the global network of Catholic universities, looking for people with the competencies to think about these topics. They are also a resource that will eventually help the Vatican become more sophisticated in how it thinks about these issues.

As you know, we have been working in these academic groups now for about two years and have never been able to meet in person because of COVID-19. We started meeting online instead, and it is beginning to help us tap into a wider range of people, not just in the United States and Europe, but also in Asia, Latin America, and beyond. It is also showing us that there is a lot of thinking and reflection available to us that may not be coming from an explicitly Catholic context but out of similar value systems, which can aid communication.

**Brian Green:** Moving towards the future: what do you see as the future of the Church's engagement with AI or the future of the PCC's work on AI?

**Bishop Tighe:** I think the near future is about leveraging the interest there is in the Church on AI and ethics in non-Church environments, to facilitate closer thinking and reflection. In the long term it is also about developing, on behalf of the Church—this could involve the Council for Culture and the Center for Digital Culture working with the Congregation for Catholic Education, which has oversight of Catholic universities—a formal invitation to Catholic universities to ethically reflect on AI and technology in general. It would really help if we could bring this more to the forefront of what they are doing—this is a difficult thing—because we need to develop people sufficiently fluent in the technological area and sufficiently in tune with its culture who can then credibly bring insights coming from positions of faith into those discussions.

I mean the danger is what Christof Koch said to us, which is that people will still be talking about this, and one day it will have happened. We will get left behind; the talk will have had no effect. This problem is one of the reasons why it is important that the Holy See bring the insights of our tradition to the international organizations, such as the UN and UNESCO, where it has representation. We cannot but acknowledge that this is a challenging moment for generating

international co-operation, judging by what we saw at COP26 in Glasgow in the environmental conversations. The global community is in general very fractured, and AI is another issue upon which it is likely to fracture.

I do think there is an appreciation of what the European Union is proposing to do, which is, rather than coming up with a comprehensive regulation—the aim of their initial effort—to look instead at the ethics of AI and come up with a much more prudential line-drawing exercise relating risk to the degree of regulation. So, the more risky the activity, the more it has to be regulated and controlled; this rather simple insight does help to set certain standards.

**Brian Green:** I only have two questions left. The first is, and you were just touching on this: what are your hopes and fears for AI and the development of AI going forward?

**Bishop Tighe:** My hope is that the undoubted potential of AI to process large data sets and deal with issues of complexity would be a very helpful tool we use to model different options, particularly on issues around the environment and the like. I am not saying technology is the only answer, because it is not. Technology, data, information, and proper understanding of the realities in which we are, I think, are very important. I would also like to think that AI would allow for a way of aligning humanly valuable applications with the more commercially viable ones, so there would be an alignment between the incentives for companies and the nobility of what they are trying to pursue in their activities.

When we look at digitalization and the internet in general, I think it is fair to say that a lot of the most monetized things have not necessarily brought forth the most noble aspects of its potential. Will AI in the long term be used as something to help us address real global problems, or will it be something used to satisfy rather immediate needs of a privileged minority, likely to be paying for that? My hope is to see what the positive is for AI, and then the negative is the failure to realize the positive, rather than getting down the track of the particular dangers.

**Brian Green:** Once again, you are leading with the positive. My last question is: do you have any final thoughts or anything else you would like to add?

**Bishop Tighe:** I would like to say, at a personal level, that for the field of moral theology and people working in professional ethics, there is enormous potential to make a real contribution to this conversation. Avoid the temptation of being the external experts who offer extrinsic solutions, become the people who facilitate the actual decision makers in thinking ethically. As I have said, I am not a highly speculative thinker, but I think many technologists are even less speculative. They want to deal with what is tangible, real, and can be measured, and yet here we have to go into questions not so amenable to that

approach. The questions are messier, and they require negotiation and discussion and engagement with different positions.

I have mentioned Kazuo Ishiguro before. He has a recent novel on AI called *Klara and the Sun*.[21] I was struck personally by an interview with Ishiguro in which he talked about growing up with his father, who was a scientist working on climate issues, long before it was fashionable.[22] Ishiguro was always very impressed by how the scientific community reasoned, and how people manage to formulate hypotheses, which stood as long as they were validated, and fell once they were disproven, and yet the community worked as one, together, in that. To have advanced an ultimately wrong hypothesis might have been helpful and there was nothing personal about it. I think we have to have a similar way of thinking about human issues. Ishiguro talks about what he calls "proper truths": really important truths.[23] These enable people to think and reflect together and discern what is really going to support humanity.

This brings me back to the idea that ethics is a method and approach to our dilemmas in life. In science and technology, rather than offering extrinsic solutions, it helps to see ethics as intrinsic to what they are doing and enabling them to be more comfortable in addressing the not-so-black-and-white questions, the not-so-binary issues. I do think sometimes the default position for many scientists is to end up working with a consequentialist moral theory because it kind of seems scientific. One of the problems, then, if that is your approach, is that you displace what does not fit into the theory. What cannot be measured gets excluded. The system of measurement is what we need to question. We have to ask: how do we measure what is humanly good, what is globally attractive, and how do we do that in an inclusive way? There is a lot more to be said.

**Brian Green:** There is much more to say and that is a wonderful place to conclude. This has been a fantastic interview. I really appreciate it, and all the time you have taken to promote work on this subject.

**Bishop Tighe:** Thank you. Ⓜ

Bishop Paul Tighe is the Secretary of the Pontifical Council for Culture. He was born and raised in Ireland and graduated from University College, Dublin, with a degree in Civil Law. He was ordained a priest in 1983 after studying at Holy Cross College, Dublin, and at the Pontifical Irish College in Rome. He then studied moral theology at the Pontifical Gregorian University.

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[21] Kazuo Ishiguro, *Klara and the Sun* (New York: Knopf, 2021).
[22] Steve Paikin, "Kazuo Ishiguro: A Nobel Novelist Searches for Hope," *The Agenda*, on *YouTube*, Mar 10, 2021, min. 19–25, www.youtube.com/watch?v=5DmZqJW8nWw.
[23] Steve Paikin, "Kazuo Ishiguro: A Nobel Novelist Searches for Hope."

In 1990 he became lecturer in moral theology at the Mater Dei Institute of Education in Dublin and at Holy Cross College and was appointed head of the theology department in 2000. Bishop Tighe was named Director of the Communications Office of Dublin Diocese in 2004, and he established the Office for Public Affairs in 2005, with the purpose of engaging the Diocese with public institutions and civic society. Pope Benedict XVI appointed Tighe as Secretary of the Pontifical Council for Social Communications in 2007 and Pope Francis appointed him titular Bishop of Drivastrum and Adjunct Secretary of the Pontifical Council for Culture in 2015. At the Council, where he now serves as Secretary General, he follows questions related to digital culture (the impact of technology on social and political discourse), ethics, and contemporary literature. Brian Patrick Green is Director of Technology Ethics at the Markkula Center for Applied Ethics at Santa Clara University.