

Three Technocratic Paradigms in Catholic Social Teaching

Andrew M. Yuengert*
Pepperdine University

Abstract: Popes Benedict XVI and Pope Francis refer to “the technocratic paradigm,” which makes it difficult to bring moral guidance to bear on economic life and the environment. Both Popes claim that an uncritical reliance on the paradigm has led to economic and environmental crises. This paper argues that there are two distinct technocratic paradigms in these encyclicals (*the technocratic mindset* and *the free market paradigm*), and that another technocratic paradigm (*technocratic governance*) features prominently in other papal writings. These three paradigms are species of a more general technological approach to nature and society, outlined and critiqued in *Gaudium et Spes*. They share a common framework and present a common set of challenges.

One Expected, One Unexpected, and One Missing

Pope Francis brought the term ‘the technocratic paradigm’ to Catholic Social Teaching (CST), in *Laudato Si*.¹ Pope Benedict XVI had previously identified, in *Caritas in Veritate*, the growing influence of what he termed “the technological mindset.” Benedict observed that the increasing pace of technological progress was making technology an “ideological power.”² The technological mindset crowded out moral reflection on the goals of technological progress. Moreover, its reductionist method rendered it unable to supply moral reflection on its own. Consequently, the technocratic paradigm³ was an untrustworthy guide to the development of peoples and the protection of the environment. A heavy reliance on it to bring about economic development and respect for the environment had produced international crises, continued underdevelopment, and environmental degradation. The dominance of the paradigm crowded out the kind of reflection necessary to understand its nature as a powerful tool. As a result, its dominance impeded practical reflection in politics and commerce.

* Social Science Division, Pepperdine University, 24255 Pacific Coast Highway, Malibu, CA 90263.
Email andrew.yuengert@pepperdine.edu; substack: [One Catholic Economist](#).

¹ Francis, Encyclical Letter *Laudato Si* (24 May 2015), ch. 3.

² Benedict XVI, Encyclical Letter *Caritas in Veritate* (29 June 2009), para. 70.

³ I will use Francis’s term, ‘the technocratic paradigm’, throughout the rest of this paper.

When I first read these encyclicals, I found the Popes' insights compelling. At the same time, I was surprised to find two distinct technocratic paradigms in their writings: one expected, and one unexpected. The *expected* technocratic paradigm was the belief that technological progress was a sufficient for development. I did *not* expect the second technological paradigm: a reliance on free economic competition to bring about order and prosperity in society. The similarities between the first and second were not obvious to me. Nevertheless, both Popes argued that these two paradigms are so closely related as to fit under the same conceptual umbrella.

My surprise went beyond the unexpected inclusion of market order in the technocratic paradigm. I was further surprised by what the Popes left out of the paradigm. Look up the word '[technocracy](#)'⁴ in any dictionary, and you will something like this definition: "government by technical experts." When I hear the word technocratic, I think of technical social science and scientific management as approaches to policy formulation and implementation. In this technocratic paradigm, society and economy become systems whose laws and structure can be modelled and manipulated. Papal writings (especially those of Paul VI, Benedict XVI, and John Paul II⁵) have addressed the potential distortions of reductionist social science.

This paper will argue that under the genus *Technocratic Paradigm* there are three species:

1. *The technological mindset*: unguided reliance on technology and the scientific method.
2. *The free market paradigm*: uncritical reliance on the undirected order of free competition.
3. *Technocratic governance*: government by social science and managerial science expertise.

The purpose of this paper is to get our bearings on this topic from papal reflections on the paradigm. Thus, I focus on the tradition of Catholic social teaching (CST), concentrating on the encyclical tradition since Vatican II. A more comprehensive treatment will of course tap the

⁴ <https://www.britannica.com/topic/technocracy>

⁵ Paul VI, Apostolic Letter *Octogesima Adveniens* (14 May 1971); Benedict XVI, *Caritas in Veritate*; John Paul II, Encyclical Letter *Centesimus Annus* (1 May 1991).

scholarly reflections on technology, markets, and technocratic government in broader Catholic social thought, and in the secular literature.

Section one provides background on the Church’s concerns about the general technocratic paradigm, in the Vatican II document *Gaudium et Spes*. Section two summarizes the critiques of the technological mindset and the free market paradigm, in order to understand the connections between them that justify including both as species of “The Technocratic Paradigm.” Section three examines the third species of paradigm, technocratic governance, arguing that its history in CST merits inclusion in the list. Section four emphasizes CST’s proposed common remedy for the shortcomings of the three paradigms: practical dialog between modern technical reason and moral reason. This dialog is most fruitful when it is housed in the minds and consciences of Christian technical experts.

1 The Limits of Modern Scientific Reason: *Gaudium et Spes*

Concerns about modern technology and modern reason – their distorted understanding of human nature, and the need for a more complete account – have been a constant theme of CST since Vatican Council II. In *Gaudium et Spes*, the Council Fathers organize their summary of the “signs of the times”⁶ around the promise and limits of technology and modern science.

The Pastoral Constitution begins by describing a “new stage of history,” brought about by human “intelligence and creative energies.”⁷ This new stage has affected how we think about who we are, our aspirations, even our religious life. *Gaudium et Spes* does not hesitate to call this change a “revolution;” in the intellectual realm the revolution is “based on the mathematical and natural sciences and on those dealing with man himself.” The practical arm of the revolution is

⁶ Vatican II, Pastoral Constitution on the Church in the Modern World *Gaudium et Spes* (7 December 1965), para. 4.

⁷ *Ibid.*, para. 4.

the increasing importance of “the technology which stems from these sciences.”⁸ The new approach to knowledge, combined with technology, allows humans to control the natural world, and promises control of the social order itself.

The new technology and knowledge vastly increase our power, but it is accompanied by a deep unease:

Thus, while man extends his power in every direction, he does not always succeed in subjecting it to his own welfare. Striving to probe more profoundly into the deeper recesses of his own mind, he frequently appears more unsure of himself. Gradually and more precisely he lays bare the laws of society, only to be paralyzed by uncertainty about the direction to give it.⁹

Our increased power does not give us the spiritual and moral resources to direct power toward a better society. We are confronted by many paradoxical tensions: between extreme wealth and extreme poverty, between exterior freedom and interior slavery, between a desire for unity and persistent deep divisions, between increased ease of communications and ideological barriers to dialog, between power over the material world and spiritual impoverishment.¹⁰

According to *Gaudium et Spes*, this growth in power has led to an imbalance

... between an intellect which is modern in practical matters and a theoretical system of thought which can neither master the sum total of its ideas, nor arrange them adequately into a synthesis. Likewise, an imbalance arises between a concern for practicality and efficiency, and the demands of moral conscience; also, very often between the conditions of collective existence and the requisites of personal thought, and even of contemplation. At length there develops an imbalance between specialized human activity and a comprehensive view of reality.¹¹

The last imbalance – between a comprehensive view and specialized activity – arises from the first – a system of thought which lacks the ability to form a synthesis. Consequently, we reveal

⁸ Ibid., para. 5.

⁹ Ibid., para. 4.

¹⁰ Ibid., para. 4.

¹¹ Ibid., para. 8.

ourselves to be both “powerful and weak,” unable to make our power serve us instead of enslaving us.¹²

The Council identifies the root of this problem in an inability to understand the human person comprehensively. The ascendant sciences produce a “sum total of ideas” about humanity that do not add up to a synthesis able to guide action – a synthesis that acknowledges the human being’s spiritual nature and calling. In response, the Church offers the modern world the synthetic understanding the sciences lack: “She ... holds that in her most benign Lord and Master can be found the key, the focal point and the goal of man, as well as of all human history.”¹³ Although modern science often considers the rejection of God and religion to be a prerequisite for progress,¹⁴ the revealed truths of Christianity¹⁵ (the dignity of the person rooted in Divine election and vocation, human sinfulness, and the social nature of the person) can orient modern power toward the service of humanity:

The truth is that only in the mystery of the incarnate Word does the mystery of man take on light.¹⁶

When God is forgotten, however, the creature itself grows unintelligible.¹⁷

Gaudium et Spes provides a description of the promise and peril of the technocratic paradigm. It acknowledges that the explosion of scientific understanding in the natural sciences, the human sciences, and in technology has led to significant improvements in human life. At the same time, the revolution in science has changed how we think about our world and our lives in this world. Nonetheless, the new sciences leave us uneasy; they are unable to guide our actions

¹² Ibid., para. 9.

¹³ Ibid., para. 10.

¹⁴ Ibid., para. 7.

¹⁵ The Council Fathers assert that other religions can contain these truths in a partial way, and thus help to remedy the imbalance caused by power without an understanding of the human person.

¹⁶ Ibid., para. 22.

¹⁷ Ibid., para. 36.

reliably, and progress has brought new, seemingly intractable problems. In order to put scientific and technological progress at our service while avoiding its dangers, we need a comprehensive account of the human being. The Church offers this comprehensive account, in its understanding of the human person in the light of Christian revelation.

One may interpret a significant portion of the encyclical tradition that followed *Gaudium et Spes* as a development of the themes outlined in its first section. *Gaudium et Spes* describes the genus *Technocratic Paradigm*; the three paradigms listed at the beginning of this paper are species of this genus. The critiques of each work out themes in *Gaudium et Spes*. Having set the stage, we now turn to the three paradigms.

2 The First Two Paradigms: Technology and Free Market Competition

Pope Benedict and Pope Francis describe the challenges of first two technocratic paradigms: *the technological mindset* and *the free market paradigm*. The critiques of both share common themes, and each develops concerns outlined in *Gaudium et Spes*. Each paradigm employs a partial view of the human person and of human society that pretends to be the whole. Nevertheless, each is methodologically unable to encompass the full truth about humanity. Consequently, none of them can remedy its own reductionist shortcomings and identify its own limits. Practical guidance based on these paradigms alone cannot solve the problems of development and environmental degradation. They only serve humanity when they are in dialog with truths only found outside of their domains – truths not of their making.

We will take the two paradigms in order: the technological mindset first, and then the free market paradigm.

2.1 *The Technological Mindset: Technology as an Ideological Force*

The history of modern science and technology is complex, but Rene Descartes' analytical and abstract method, and Francis Bacon's promotion of empirical method are central to every account.¹⁸ In the course of the seventeenth century, the new science focused its energies toward the mastery of nature through observation, experimentation, and abstract analysis. Since a substance's nature – what it *is* – is invisible to external observation, the new scientists and technologists were suspicious of any impediments to their work based on non-scientific (religious or metaphysical) claims. One did not have to understand what a tree was in order to analyze its growth or evaluate its wood as a building material. Likewise, one did not have to comprehend the sacred worth of a human being to improve his material lot.

In *Caritas in Veritate*, Pope Benedict XVI characterizes the technological mindset as a system of thought that focuses on *how* questions and neglects *why* questions:¹⁹ *How* might we clone a human being, or bring about human conception outside of the womb? *How* might we split the atom, modify coronaviruses, redirect the flow of rivers? All of these *how* questions might easily provoke corresponding *should* questions: should we treat human gametes as nothing more than manipulable matter? Is a river's ecosystem more than a quantifiable flow of water resources?

For nearly four hundred years, questions about whether we should embrace new, potentially disturbing technologies have had little influence on technological investigation. Representative technological answers to *why* questions take a standard form: "Why? Because we can. Because technology has led to ongoing improvements in human well-being. Because while people always

¹⁸ René Descartes, *Discourse on Method and Meditations on First Philosophy*, 4th ed., trans. Donald A. Cress (Hackett Publishing, 1998); Brian Vickers (ed.), *Francis Bacon: The Major Works* (Oxford University Press, 2008).

¹⁹ Benedict XVI, *Caritas in Veritate*, para. 70.

object to new applications of technology, these objections always fade away in the face of better, safer, more healthy lives.” The story of repeated objections to new technology combined with the eventual acceptance of technological success “gives rise to the idea that technology is self-sufficient.”²⁰ In the historical narrative of the technological mindset, *why* questions have always been impediments to the great good of technological progress.²¹

It should be noted that the new scientific approach has implicit answers to why questions, but that it answers these questions within a limited materialist frame. New technology is justified based on the taken-for-granted value of power over nature, increased health, reduced physical suffering, and longer life. These improvements in material well-being are a compelling advertisement for technological progress, but they are not sufficient justification. Human beings have spiritual as well as material natures. To evaluate new technology fully requires a comprehensive understanding of the spiritual, social, and material natures of the human being, and of how these natures fit together to constitute the human person and human society..

The astounding material advances made possible by technological innovation have given technology (and the scientific method which grounds it) an unquestioned status: who can argue against more technological innovation? And yet, along with the growth of technology there has been a growing disquiet, expressed in the rise of postmodern critiques of progress, and in religious reflections on modernity like *Gaudium et Spes*, summarized in the previous section. Technological advances produce new cures, new material comforts, and more leisure time for personal enrichment, but they also enable more oppressive regimes of surveillance and social control, and more lethal weapons (kinetic, nuclear, biological). Moreover, cultures on the leading

²⁰ Ibid., para. 70.

²¹ For a recent defense of enlightenment reason and science, see Steven Pinker, *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress* (Penguin Books, 2019).

edge of technological advance are most likely to suffer from depression, boredom, loneliness, and restless alienation.

The answers to the *how* questions – embodied in scientific and technical knowledge – are clearly not sufficient for our happiness. We live amid an explosion of technical knowledge, but are incapable of integrating that knowledge into human life. We know the inner life of stars but are ignorant of the inner life of the person; we have mastered the biology of reproduction, but are helpless to create lasting marriages and friendships; we have knowledge of traffic patterns, patterns of commerce, distributions of income and health, but no practical knowledge of how to build community, neighborhoods, and polities.

The insufficiency of technology is built into the technocratic paradigm.²² The scientific method focuses only on that part of reality that is external and measurable. It discovers relationships among the things it measures via experimentation, all with a view to understanding and manipulating the external world. Pope Francis describes the approach:

This paradigm exalts the concept of a subject who, using logical and rational procedures, progressively approaches and gains control over an external object. This subject makes every effort to establish the scientific and experimental method, which in itself is already a technique of possession, mastery and transformation. It is as if the subject were to find itself in the presence of something formless, completely open to manipulation.²³

According to Benedict XVI, the natural world (including human nature) is more than a formless collection of contingent data, whose value lies solely in our ability to manipulate it to serve our needs. It is a “wondrous work of the Creator containing a grammar which sets forth ends and criteria for its wise use, not its reckless exploitation.”²⁴ Because technology focuses exclusively

²² For a more comprehensive treatment of the theological blindness of the paradigm, see Mary Hirschfeld, “What is the Technocratic Paradigm, and Must Business Be Structured By It?” in Daniel K. Finn (ed.), *Business Ethics and Catholic Social Thought* (Georgetown University Press, 2021), 93-116.

²³ Francis, *Laudato Si*, para. 106.

²⁴ Benedict XVI, *Caritas in Veritate*, para. 48.

on *how* questions, and ignores *why* questions, it is incapable of valuing nature as anything more than useful stuff. We *can* make nature serve us. Nevertheless, without an understanding of the value of nature beyond our ability to shape it, we will be unable to evaluate whether our technological advances are good and worthy of us.

If we are to understand human nature as more than electro-chemical reactions, physical and ecological processes, and biological forces, we need answers to *why* questions. More exactly, we need answers to the closely-related *what* questions: *what* is a human being, beyond a bag of chemicals or patterns of electrical activity in neurons? Similarly, to grasp the natural environment as more than a source of resources to exploit, we need an understanding of it based on something more than its observable material characteristics. What is a mouse, beyond biological matter on which to experiment? What is a river, beyond a source of water for a city?

The success of the technocratic paradigm, and its program of studiously avoiding the *why* questions, has led to a kind of epistemological dominance. Pope Francis notes that it is difficult to see beyond the imperatives of technology. We assume that technological progress is neutral, when in fact it shapes the kind of society we live in, and serves the interests of those who control its power.²⁵ To Pope Benedict, the clearest expression of the dominance of technology is a culture in which “the conscience is simply invited to take note of technological possibilities.”²⁶ The expectation that any technological advance will eventually find some good application deadens our moral sense about what is lost when we fail to take into account the full nature of the human person and the natural order.

Pope Francis identifies the paradox of technology: it can orient itself toward the fullness of the truth only by accepting an account of truth that it cannot construct:

²⁵ Francis, *Laudato Sí*, para. 70.

²⁶ Benedict XVI, *Caritas in Veritate*, para. 75.

It cannot be maintained that empirical science provides a complete explanation of life, the interplay of all creatures and the whole of reality. This would be to breach the limits imposed by its own methodology. If we reason only within the confines of the latter, little room would be left for aesthetic sensibility, poetry, or even reason's ability to grasp the ultimate meaning and purpose of things.²⁷

Pope Benedict summarizes the paradox as the need “to discover a meaning that is not of our own making.”²⁸

If the meaning of human life and the natural order cannot be found via the scientific method, where might we find it? Benedict points to a recovery of a metaphysics;²⁹ in the quotation above, Francis advocates an openness to non-scientific humanistic and cultural traditions. Both emphasize the Christian faith as a source of meaning that human beings have not created, but which comes to us from outside of us. The *truth* of Pope Benedict's *Caritas in Veritate* is received as a gift, through our creation and through loving communion with our Creator.³⁰ Pope Francis's extended reflection on “The Gospel of Creation” offers an understanding of nature that puts technology in proper perspective.³¹

The modern technological/scientific revolution is based on a rejection of spiritual and religious truths that stand outside of the scientific project. This has resulted in a persistent blindness to non-material realities – what Francis calls “a stifling immanence.”³² One cannot apprehend non-material, spiritual realities through active technique. They must be received and contemplated. We must explore these non-material realities – the dignity of the human person, the created goodness and integrity of the natural order – if we are to put technology fully at the service of human beings and the social order.

²⁷ Francis, *Laudato Sí*, para. 199.

²⁸ Benedict XVI, *Caritas in Veritate*, para. 70.

²⁹ *Ibid.*, para. 31.

³⁰ *Ibid.*, para. 1.

³¹ Francis, *Laudato Sí*, ch. 2.

³² *Ibid.*, para. 119.

We can summarize the papal critique of the technological mindset in four propositions. We will use these propositions to compare all three paradigms.

1. **Reductionist method and goal.** Technology advances through a combination of the scientific method and applied engineering. It concentrates on only those aspects of reality that can be measured and controlled – the material world. Its search for understanding is powered by *how* questions – how to bring matter under human control.
2. **Success and Dominance.** The spectacular success of technology in reducing human suffering and improving material welfare gives it status as an unquestioned paradigm for human progress. We have developed the habit of entrusting ourselves to technological progress.
3. **What is excluded or ignored.** Technology explicitly rejects questions about the essential, interior nature of the objects of research (*what* things are as a whole), because these questions are unquantifiable. They are treated as distractions from (or impediments to) technological progress.
4. **Need for a more comprehensive view, from outside of the paradigm.** We need answers to *what* and *why* questions to evaluate whether technological progress improves human welfare. Because technological method excludes these questions, these answers must come from outside the technological worldview.

2.2 The Free Market Paradigm

Pius XI, in *Quadragesimo Anno* (1931), describes the free market paradigm as a corollary claim of nineteenth century liberal ideology:

... economic life must be considered and treated as altogether free from and independent of public authority, because in the market, i.e., in the free struggle of competitors, it would have a principle of self-direction which governs it much more perfectly than would the intervention of any created intellect.³³

At first glance the technological mindset and the free market paradigm are strikingly different. The technological mindset is active: scientists and engineers study the material order in order to conquer it and place it at our service. In contrast, those who promote the free market paradigm promote a hands-off government passivity toward the economic order. This passivity is only apparent, however. At the heart of the paradigm is intense action: employers, firms, buyers, and workers seeking profits, goods and services at low prices, and high wages. It is not just the

³³ Pius XI, Encyclical Letter *Quadragesimo Anno* (15 May 1931), para. 88.

activity of buyers and sellers that drives this paradigm. It is the undirected order that arises from their competition: Pius XI's "principle of self-direction."

What do the technocratic paradigm, whose driving force is the engineer's active mastery of the material world, and the free market paradigm, whose guiding imperative is respect for the undirected order of market competition, have in common? The similarities become clear when we apply the four-part critical framework, developed for technology in the previous section, to the market paradigm.

1. ***Reductionist method and goal.*** Economists simplify the reality of exchange, in order to understand the operations of markets. The first simplification is that buyers and sellers, workers and employers, act out of self-interest. Any economist will tell you that self-interest is not identical to greediness. It can include care about your family, your friends, or your community. Self-interest can be quite broad, but in the economic account of exchange it does exclude the immediate interests of the other side of the transaction. As Adam Smith declared in the *Wealth of Nations*, you do not expect bread from the baker because he cares about you, and you do not buy from him because you care about him.

The second simplification is the assumption that exchange takes place amid competition among buyers and sellers. Competition promotes the "self-direction" of markets toward mutually-beneficial exchange.³⁴ It brings together buyers who value the goods with sellers who produce those goods at low cost, and promotes new innovations to meet human needs.

Economists are broadly supportive of markets. Few think that the order of markets is entirely benign, however. Most are somewhere in the broad middle between a kind of free

³⁴ Vernon L. Smith, *Rationality in Economics: Constructivist and Ecological Forms* (Cambridge: Cambridge University Press, 2007).

market fundamentalism and a radical suspicion of markets. Consequently, the economic theory of markets is rich and complex. Ongoing arguments about market power, external effects, public goods, the economics of government, information, strategic action, and behavioral critiques continuously clarify and correct our understanding.

2. *The Success and Dominance of the Paradigm.* Free markets have generated tremendous increases in material well-being since their adoption in eighteenth century northern Europe. The spread of markets to the developed world has reduced material poverty in those countries which have embraced markets most enthusiastically. The success of markets lays a heavy burden of proof on those who would constraint them. This is similar to the taken-for-granted dominance of technology. Just as we are supposed to leave the scientists and engineers free to pursue their projects wherever they lead, we are supposed to leave the entrepreneurs and businessmen to pursue profits wherever they lead.

The combination of free markets and technology strengthens the dominance of each, and explains the inclusion of markets in the technocratic paradigm. Technology promises value to consumers and corporations, and markets for technology provide capital and marketing for new technology. Francis decries the power of “the alliance between the economy and technology” to marginalize “anything unrelated to its immediate interests.”³⁵ Benedict XVI includes the operations of markets and technological advance under the same heading, as parts of a “technical mindset.” Lacking any broader vision of human happiness to temper this mindset, “... the result is confusion between ends and means, such that the sole criterion for action in business is

³⁵ Francis, *Laudato Sí*, para. 54.

thought to be the maximization of profit, in politics the consolidation of power, and in science the findings of research.”³⁶

Examples of this powerful combination of markets and technology are easy to find: the lightly-regulated spread of IVF (in vitro fertilization) in the U.S.; the explosive spread of gambling, both online and into sports betting; the highly-profitable sale of customer information to marketers, often without customer knowledge.

3. *What is excluded or ignored.* The theory of market exchange requires a theory of value.

Goods and services are valuable insofar as they command a price – are useful to someone willing to pay for them. The value of a worker is what an employer is willing to pay for his services.

These monetary values coordinate exchange, but they fail to capture other important values. In

Centesimus Annus (1991), John Paul II describes both the contributions and limitations of markets in terms of the values embodied in market exchange:

It would appear that, on the level of individual nations and of international relations, the free market is the most efficient instrument for utilizing resources and effectively responding to needs. But this is true only for those needs which are solvent, insofar as they are endowed with purchasing power, and for those resources which are marketable, insofar as they are capable of obtaining a satisfactory price. But there are many human needs which find no place on the market.³⁷

Similarly, the workplace is an important source of labor income and profits, but it is also a setting in which workers and employers develop (or fail to develop) individual and social virtues:

persistence, sacrifice and generosity, and justice in all its forms. In *Laborem Exercens* (1981),

John Paul II contrasts this subjective value of work with its objective (productive) value: “There is no doubt that human work has an ethical value of its own, which clearly and directly remains

³⁶ Benedict XVI, *Caritas in Veritate*, para. 71.

³⁷ John Paul II, *Centesimus Annus*, para. 34.

linked to the fact that the one who carries it out is a person, a conscious and free subject, that is to say a subject that decides about himself.”³⁸

In spite of the inability of markets to capture the full value of goods, economists apply the framework of market exchange broadly – to *markets* for marriage, criminal behavior, and political influence, for example. Here we meet the limits of economic reductionism. Goods of marriage, criminal activity, and politics have aspects of negotiation and exchange, but they are more complex than goods traded in markets. To treat them as nothing more than exchangeable goods damages our understanding of them, and may damage the goods themselves.³⁹

4. *Need for a more comprehensive view, from outside of the paradigm.* Pope Paul VI, in *Populorum Progressio*, responded to postwar confidence that economic development was a purely technical matter by insisting that there was more to humanity than technology and economics could capture: “Economics and technology are meaningless if they do not benefit man, for it is he they are to serve.”⁴⁰ All of the partial insights of economics and technology, combined with the insights of the other human sciences, can never add up to a complete account of the whole human being.

In *Centesimus Annus*, John Paul II asserts that “there are collective and qualitative needs which cannot be satisfied by market forces. There are important needs which escape its logic.”⁴¹ Transfixed by the power of market exchange, we overlook “needs which escape its logic.” We

³⁸ John Paul II, Encyclical Letter *Laborem Exercens* (14 September 1981), para. 6. Pope Francis, in *Laudato Si*, adds environmental resources to the list of goods whose value is distorted by markets. Something important is lost when we “view other living beings as mere objects subjected to arbitrary human domination” (para. 82).

³⁹ For examples, see Michael Sandel, *What Money Can't Buy: the Moral Limits of Markets* (Farrar, Straus, and Giroux, 2013).

⁴⁰ Paul VI, Encyclical Letter *Populorum Progressio* (26 March 1967), para. 34.

⁴¹ John Paul II, *Centesimus Annus*, para. 40.

risk “an idolatry of the market, an idolatry which ignores the existence of goods which by their nature are not and cannot be mere commodities.”⁴²

Benedict XVI, in *Caritas in Veritate*, offers the strongest case for the necessity but insufficiency of technological and social science knowledge. If we are ignorant of the truth of the whole human being (*veritas*), we cannot muster effective love (*caritas*) for actual human beings – a love capable of guiding action toward full human flourishing in all its dimensions.⁴³

The criticisms of both the technological mindset and the free market paradigm are similar in structure. Note that neither criticism calls into question the significant contributions of technology or markets. The primary concerns are that the technological mindset is an *unguided* reliance on technology, that the free market paradigm is an *uncritical* reliance on markets. Each paradigm needs guidance that it cannot provide on its own. Direction can only come from outside – from reflections on the whole human being, not just those aspects of human reality that natural science, managerial science, and social science happen to analyze.

3 The Other Technocratic Paradigm: Technocratic Governance

“Interdependence obliges us to think of one world with a common plan.” – Pope Francis⁴⁴

As I noted in the introduction, the common definition of ‘technocracy’ – “government by technical experts” – describes neither the technocratic mindset nor the free market paradigm. There is another well-known technocratic paradigm, at least as important as the first two: technocratic governance. Like them, it is a powerful tool for envisioning and managing the world. Like them, it is reductionist by method – valuable as a tool, but dangerous when it is

⁴² Ibid., para. 40.

⁴³ Benedict XVI, *Caritas in Veritate*, paras. 4, 31.

⁴⁴ Francis, *Laudato Sí*, para. 164.

treated as a comprehensive account of social reality. We can analyze it in the same four-part schema of the previous section.

1. ***Reductionist method and goal.*** Managerial technocracy dates back to the progressive era at the turn of the twentieth century. Early planning made use of the tools of emergent social science and scientific management to engineer society. Social planning begins by assuming the existence of a *system* – in public health, ecological relationships of infection and microbial evolution; in economics, orderly patterns of exchange and competition; in sociology, patterns of norm construction and transmission. Descriptions of these systems are necessarily reductionist. Although schematic models are necessarily abstract and unreal, the very act of theoretical system-building tends to reify the model. We speak of markets, the ecology of infectious disease spread, and systemic racism as if they are as real as a purchase of milk at Walmart, a runny nose, or the refusal of service to a black man. Promoters of a particular schematic model often insist that it is *more* real than our everyday experience; some theoretical model gives us access to what is *really going on*:

- A tenant might think that his landlord is raising his rent because she is greedy, but it is *in reality* a shift in market supply that raises the rent.
- An employer may think that it is only common sense to hire the “most qualified applicant,” but he is *in fact* reinforcing a norm of merit whose *real* function is to reduce the opportunities of minorities.

We cannot deny the crucial insights into social order based on these models. At the same time, as a map is always less real than the landscape it sketches, theoretical models are *less real* than the societies they describe. Since managerial technocracy draws on social science for its theoretical models, it shares many of the blind spots of economics (including the blind spots of the free market paradigm), and of social science more generally.

2. ***The Success and Dominance of the Paradigm.*** As noted in the previous section, the accomplishments of technology and free markets render them difficult to criticize. At least, the burden of proof is on whoever raises concerns about them. Similarly, technocratic system-thinking and scientific management is ubiquitous. It is difficult to conceive of any other way to understand and govern large, complex societies and institutions. Nevertheless, growing concerns about each of these paradigms oblige us to explore the limitations of each. Each can be a valuable tool, but each is unable to direct itself. What do managerial technocracy and its partner, reductionist social science modelling, leave out?

3. ***What is excluded or ignored.*** There is a rich secular literature on the dangers of managerial planning. James C. Scott, in *Seeing Like a State*, traces the failures of large scale state planning to its blindness to the local knowledge that it excludes from its abstract plans.⁴⁵ Friedrich Hayek developed a systematic critique of centralized government economic planning, arguing that central plans exclude local knowledge that is crucial to economic efficiency and innovation.⁴⁶

A technocratic planner constructs a schematic model of society not out of curiosity, but in order to improve society. Unsurprisingly, he will specify a model of society that it is amenable to being improved by policy. Stubborn tradeoffs which arise from human freedom, sinfulness, and cultural pluralism are often abstracted away. This promotes overconfidence in the plan. Moreover, because they are abstract, models tend to be comprehensive in scope, since there are few practical limitations in theoretical space. Thus, planners often confidently propose comprehensive reforms which are achievable only in an abstract model. Among the examples of

⁴⁵ James C. Scott, *Seeing Like a State: How Certain Schemes Improve the Human Condition Have Failed* (Yale University Press, 1998).

⁴⁶ Friedrich A. Hayek, "The Use of Knowledge in Society," *American Economic Review* 35(1945): 519–530.

this unrealistic reform analyzed by James Scott are urban planning in Brazil and villagization in Tanzania.⁴⁷

Popes have written about the limitations and dangers of technocratic management, even as *Caritas in Veritate* and *Laudato Si* focus our attention on the first two technocratic paradigms. Paul VI, in *Octogesima Adveniens*, praises the contributions of the human sciences to our understanding of society. At the same time, he notes that the growth of the social sciences marks a radical change: humanity itself has become an object of research and control:

The “human sciences” are today enjoying a significant flowering. On the one hand they are subjecting to critical and radical examination the hitherto accepted knowledge about man.... On the other hand, methodological necessity and ideological presuppositions too often lead the human sciences to isolate ... certain aspects of man, and yet to give these an explanation which claims to be complete or at least an interpretation which is meant to be all-embracing from a purely quantitative or phenomenological point of view. This scientific reduction betrays a dangerous presupposition. To give a privileged position in this way to such an aspect of analysis is to mutilate man and, under the pretext of a scientific procedure, to make it impossible to understand man in his totality.⁴⁸

The success of the social sciences has led to

... the elaboration of models of society *to be subsequently imposed on men* as scientifically tested types of behavior. Man can then become the object of manipulations directing his desires and needs and modifying his behavior and even his system of values. There is no doubt that there exists here a grave danger for the societies of tomorrow and for man himself. For even if all agree to build a new society at the service of men, it is still essential to know what sort of man is in question.⁴⁹

Paul VI criticizes the simplifications of the social sciences, which “mutilate man,” and “make it impossible to understand man in his totality.” He goes on to raise a more urgent alarm: as the human sciences have grown in confidence, they have developed “models of society to be ... imposed on men.” These models become templates for programs of manipulation of human

⁴⁷ Scott, *Seeing Like a State*, chs. 4, 7.

⁴⁸ Paul VI, *Octogesima Adveniens*, para. 38.

⁴⁹ *Ibid.*, paras. 38-39. Italics are mine.

desires, behaviors, and values. Paul VI describes this as a “grave danger,” since it presumes to “build a new society” based on a model of “mutilated men.”

In *Centesimus Annus*, John Paul II emphasizes that the disorders of socialist states were rooted in an incomplete understanding of human nature and society:

the fundamental error of socialism is anthropological in nature. Socialism considers the individual person simply as an element, a molecule within the social organism, so that the good of the individual is completely subordinated to the functioning of the socio-economic mechanism. Socialism likewise maintains that the good of the individual can be realized without reference to his free choice, to the unique and exclusive responsibility which he exercises in the face of good or evil.⁵⁰

John Paul II insisted that Soviet and European communism collapsed for spiritual reasons. The lack of material goods was only a symptom of spiritual emptiness. This emptiness was a consequence of governing structures which refused to acknowledge the social and spiritual nature of the human person.⁵¹

4. *Need for a more comprehensive view, from outside of the paradigm.* Benedict XVI, in *Caritas in Veritate*, dwells at length on the inability of dominant social science to lead to economic and social improvement by itself:

... among the causes of underdevelopment there is a lack of wisdom and reflection, a lack of thinking capable of formulating a guiding synthesis, for which a clear vision of all economic, social, cultural and spiritual aspects is required. The excessive segmentation of knowledge, the rejection of metaphysics by the human sciences, the difficulties encountered by dialogue between science and theology are damaging not only to the development of knowledge, but also to the development of peoples, because these things make it harder to see the integral good of man in its various dimensions.⁵²

⁵⁰ John Paul II, *Centesimus Annus*, para. 13.

⁵¹ *Ibid.*, para. 24.

⁵² Benedict XVI, *Caritas in Veritate*, para. 31.

When the various fields of knowledge are siloed, and each of them is alienated from metaphysics and religion, practical projects based on scientific understanding alone will fail to bring about “the development of peoples.”

All three species of the technocratic paradigm (technology, markets, and planning) share a reliance on reductionist abstraction and an inability to draw on comprehensive accounts of humanity from philosophy and religion. Consequently, each is unable to put itself fully at the service human beings as they actually exist. The third paradigm is different from the first two in one important respect: in the contradictory attitude toward it in CST. In papal writings there is a tension between, on the one hand, an expressed confidence in technocratic planning implicit in practical advice to governments and, on the other hand, papal suspicion and critique of social science models. Even as Popes question reductionist social science and the models of society based on it, in their practical reflections they take for granted the ability of comprehensive expert planning to solve social problems. This tension is present in every social encyclical since Pope John XXIII. It is not difficult to find examples: John XXIII’s offers a detailed blueprint for balanced development (*Mater et Magistra*);⁵³ Paul VI’s confidently proposes a jointly managed international development fund;⁵⁴ John Paul II’s expresses confidence in *Laborem Exercens* that it is “possible to actuate a plan for universal and proportionate progress for all,” after detailing the wide-ranging requirements of such a plan;⁵⁵ In *Caritas in Veritate*, Benedict XVI calls for a reform of the United Nations and for stronger international regulation, in order to give global authority “real teeth.”⁵⁶

⁵³ John XXIII, Encyclical Letter *Mater et Magistra* (15 May 1961), paras. 122-155.

⁵⁴ Paul VI, *Populorum Progressio*, paras. 51-53.

⁵⁵ John Paul II, *Laborem Exercens*, para. 18.

⁵⁶ Benedict XVI, *Caritas in Veritate*, para. 67.

4 Dialog with Technocracy

Each of the three technocratic paradigms by method and practice exclude inquiry into the deepest questions about human life – the meaning of human dignity, the purpose of suffering and death, the character of morality and happiness – in favor of less disputed questions. Science and technology focus the control of material reality. Economic theory studies exchange and efficiency. Government planners seek to optimize economic and social indicators. Each paradigm is the fruit of the modern desire to ignore moral questions in favor of technical progress.

Still, we cannot free ourselves from the moral questions. By ignoring them, we flatten our conception of human life, reducing it either to physical comfort, health, pleasure, and material abundance, or to what Benedict XVI called a “self-creating freedom” driven by supposedly autonomous acts of will.⁵⁷ Paul VI notes in *Octogesima Adveniens*, that even when these paradigms deliver health, comfort, and wealth, they “deepen rather than solve the mystery of the heart of man.” They fail to satisfy “the desire which springs from his innermost being,”⁵⁸

A recurring theme of Benedict XVI (and of Vatican II) is that we can fully understand and safeguard human dignity only in the light of Christian revelation. Secular conceptions of man which focus only on the external and biological aspects of the human person, and attempt to improve the human lot without regard to the spiritual and social nature of the person, will fail:

The conviction that man is self-sufficient and can successfully eliminate the evil present in history by his own action alone has led him to confuse happiness and salvation with immanent forms of material prosperity and social action.... In the long term, these convictions have led to economic, social, and political systems that trample upon personal and social freedom, and are therefore unable to deliver the justice that they promise.⁵⁹

⁵⁷ Benedict XVI, *The Listening Heart: Reflections on the Foundations of Law* (Address to Bundestag, 22 September 2011).

⁵⁸ Paul VI, *Octogesima Adveniens*, para. 40.

⁵⁹ Benedict XVI, *Caritas in Veritate*, para. 34.

Benedict proposes a dialog between modern reason and faith. There are preconditions for such a dialog.⁶⁰ Primarily, Christianity and other religions must enjoy secure public standing in politics and in the public realm more generally. If the insights of faith are to supplement the understanding and activity of the technocratic paradigm, society must safeguard the right to profess one's religion, and to reflect on public policy in light of truths of faith. The rights of religion will benefit both religion and secular reason:

Reason always stands in need of being purified by faith: this also holds true for political reason, which must not consider itself omnipotent. For its part, religion always needs to be purified by reason in order to show its authentically human face. Any breach in this dialogue comes only at an enormous price to human development.⁶¹

The dialog that Benedict proposes is not dialog in a seminar room, but dialog among those who are engaged in the common practical project of “justice and peace”:

Fruitful dialogue between faith and reason cannot but render the work of charity more effective within society, and it constitutes the most appropriate framework for promoting fraternal collaboration between believers and non-believers in their shared commitment to working for justice and the peace of the human family.... For believers, the world derives neither from blind chance nor from strict necessity, but from God's plan. This is what gives rise to the duty of believers to unite their efforts with those of all men and women of good will, with the followers of other religions and with non-believers, so that this world of ours may effectively correspond to the divine plan.⁶²

In *Octogesima Adveniens*, Paul VI foresees that the integration of the spiritual dimension, fully revealed in Christ, will come about not through the intervention of Church authority, but through the efforts of Christians who are experts in various technical fields:

Should the Church in its turn contest the proceedings of the human sciences, and condemn their pretensions? As in the case of the natural sciences, the Church has confidence in this research also and urges Christians to play an active part in it. Prompted by the same scientific demands and the desire to know man better, but at the same time enlightened by their faith, Christians who devote themselves to the human

⁶⁰ Chapter six of Andrew M. Yuengert, *Catholic Social Teaching in Practice: Exploring Practical Reason and the Virtues Tradition* (Cambridge University Press, 2023), contrasts the different conceptions of and expectations for dialog in CST and in technical social science.

⁶¹ *Ibid.*, para. 56.

⁶² *Ibid.*, para. 57.

sciences will begin a dialogue between the Church and this new field of discovery, a dialogue which promises to be fruitful.⁶³

The most effective way for the Church to bring technocratic tools into dialog with her revealed understanding of the human person is for Catholic scientists, social scientists, and managerial professionals to bring to their disciplinary expertise an understanding of the divine vocation of the human person.

The most fruitful setting for dialog between faith and technical reason is in the minds and hearts of Christian professionals, in collaboration with people of good will in every discipline. Christians who inhabit two worlds – the world of the technocratic paradigm and the world of Christian faith – are best situated to bring the two into fruitful dialog, in which faith purifies reason and reason purifies faith.

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⁶³ Paul VI, *Octogesima Adveniens*, para. 40.

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