"Science and Tradition in *Laudato Si'* and CST"
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Four phases of the Catholic Church's relationship to science:

1. **Astronomy and Physics in the 16th & 17th centuries.**
    - Copernicus questions geocentrism
    - Galileo endorses heliocentrism & proposes Scriptural interpretation … and runs afoul of the Counter-Reformation.
    - 1992: John Paul II pardons Galileo, saying that Galileo "also formulated important norms that are indispensible for reconciling Holy Scripture and science."

2. **Geology and Biology in the 19th & 20th centuries.**
    - A deepened sense of geological time
    - The question of whether species change and develop over time, or are "specially created" by God in their current perfect state
    - Charles Darwin (1859): "much light will be shed on man and his history"
    - Pius XII (1950): there is no inherent conflict between evolution and Catholic faith as long as human uniqueness is maintained
    - John Paul II (1996):
        o Evolution is "more than merely a theory." Human bodies are the products of physical evolution. Human souls are the direct creation of God.
        o "It is important to set proper limits to the understanding of Scripture, excluding any unseasonable interpretations…. In order to mark out the limits of their own proper fields, theologians and those working on the exegesis of the Scripture need be well informed regarding the results of the latest scientific research."

3. **Nuclear Power and Biotechnologies in the 20th & 21st c.**
    - Power control the atom and wreak large-scale destruction
    - Power to control the foundations of life—the cell, reproduction, genetics.
    - Technologies are not neutral.

4. **Ecology, technology, and degradation**

    - Ecology is about relationships: between humans and God, humans and each other, and humans and the earth that sustains. The Earth, our

"common home" is deteriorating. There are myriad "exclusions" that degrade life, both human and environmental.

- Where does science fit in and draw on the prior three eras?

→ *Scripture and Interpretation*

- o "Although it is true that we Christians have at times incorrectly interpreted the Scriptures, nowadays we must forcefully reject the notion that our being created in God's image and given dominion over the earth justifies absolute domination over other creatures. The biblical texts are to be read in their context, with an appropriate hermeneutic, recognizing that they tell us to "till and keep" the garden of the world (cf. *Gen* 2:15). "Tilling" refers to cultivating, ploughing or working, while "keeping" means caring, protecting, overseeing and preserving. This implies a relationship of mutual responsibility between human beings and nature." (Pope Francis, *Laudato Si'* ch. 2, no. 67).

→ *The Importance of Science*

- o Benedict XVI (2009): "The book of nature is one and indivisible."
- o Pontifical Academics of Science and Social Science
- o International Theological Commission
- o "**Science and religion**, with their distinctive approaches to understanding reality, can enter into **an intense dialogue fruitful for both**." (Pope Francis, *Laudato Si',* ch 2 no 62). "If we are truly concerned to develop an ecology capable of remedying the damage we have done, **no branch of the sciences and no form of wisdom can be left out**, and that includes religion and the language particular to it" (Ch 2 no 63).
- o "A **very solid scientific consensus** indicates that we are presently witnessing a disturbing warming of the climatic system. … Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat this warming or at least the human causes which produce or aggravate it." (ch 1 no. 23)
- o Example: Fresh water, which is described by science but valued by humans. "Fresh drinking water is an issue of primary importance, since it is indispensable for human life and for supporting terrestrial and aquatic ecosystems... One particularly serious problem is the quality of water available to the poor. Every day, unsafe water results in many deaths and the spread of water-related diseases, including those caused by microorganisms and chemical substances." (*Laudato Si'* Ch 1, 28-29) … And: "*access to safe drinkable water is a basic and universal human right, since it is essential to human survival and, as such, is a condition for the exercise of other human rights*. Our world has a grave social debt towards the poor who lack access to drinking water, because *they are denied the right to a life consistent with their inalienable dignity*" (30).

→ *The Misuse of Technology*

- "it must also be recognized that nuclear energy, biotechnology, information technology, knowledge of our DNA, and many other abilities which we have acquired, have given us tremendous power. More precisely, they have given those with the knowledge, and especially the economic resources to use them, an impressive dominance over the whole of humanity and the entire world. Never has humanity had such power over itself, yet nothing ensures that it will be used wisely, particularly when we consider how it is currently being used. We need but think of the nuclear bombs dropped in the middle of the twentieth century, or the array of technology which Nazism, Communism and other totalitarian regimes have employed to kill millions of people, to say nothing of the increasingly deadly arsenal of weapons available for modern warfare. In whose hands does all this power lie, or will it eventually end up? It is extremely risky for a small part of humanity to have it." (*Laudato Si'* ch 3 no 104)

Conclusions and Takeaways

- When considering "theology and science," it's always good to specify: what kind of science? In what religious context? With what sorts of theological concerns?

- Where has the data of contemporary science illuminated Creation for you? Does it help you to read the "book of nature"?

- Theology has its own truths even as it embraces contemporary science. What resources can Theology offer to imagine a world of flourishing for all?