Apologia Pro Libro Suo[1]

Staying at a hotel across the street from a major public research university and preparing to speak about the Franciscan view of nature in a scientifically understood world, I was struck by the lobby's décor. The walls were covered with scientific formulas and graphs. I guessed that it was to make visiting parents and their children comfortable while thinking of college and the challenges it brought. But there was not a single meaningful expression anywhere! It was all nonsensically playing with science's symbols. Have we lost trust in reason and forgotten its dignity? Is this the state of today's academia?

I thought of the task yet to be done. Instead of alienating us by its abstractions and threatening us with its powers, should scientifically understood nature not mean something, and should this meaning not be an integral part of all we know? I have always felt that physics is a powerful corrective when the scholarly mind goes too far astray. But this is not to dismiss scholarly work that is not science, technology, engineering and mathematics as quibbles in the ivory tower. Only those unaware of the complex interactions of the two very different academic cultures, STEM and the humanities, would think so.[2] Both cultures are of equal importance; their differences are to be respected, and students are best educated when learning in both of them.[3] But this has been said often enough. My task is a different one. It is to find the philosophical framework to speak of nature in various ways so that it comes together as one and provides reliable guidance for acting with attentiveness to nature, including our own.

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[1] With apologies to Charles Taylor, whose use of the same pun—alluding to the title of John Henry Newman's account of his conversion to Catholicism—I discovered only after the idea occurred to me and I searched the internet to find out whether it was new, *cliché*, or fair to be used. See Charles Taylor, "*Apologia Pro Libro Suo*." In *Varieties of Secularism in a Secular Age*, edited by Michael Warner, Jonathan VanAntwerpen and Craig Calhoun (Cambridge, MA: Harvard University Press, 2010).

[2] First articulated in the 20th-century context by C. P. Snow (1959), *The Two Cultures and the Scientific Revolution* (New York, NY: Cambridge University Press).

[3] See, for example, National Academies of Sciences, Engineering, and Medicine, The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree. Edited by David Skorton and Ashley Bear. Washington, DC: The National Academies Press (2018).

But first, what is nature? We use the word in many ways, and a definition seems to be needed, but I beg the reader to be patient and not demand too exact a definition too soon. I seek to speak of nature broadly, without reductionism, and I fear that a precise definition would be a first step to reductionism. For now, I will only say that nature is the context of human acting that is not of human making.[4]

While I expect that this book will be of most interest to scientists with an interest in philosophy, there are two other groups of readers that I want to reach. One of them is philosophers who recognize the need to take advantage of science's greatest successes to arrive at a better philosophy of nature. Acting in harmony with nature means something different today from what it meant in pre-modern times. Finally, I want to reach Christians, particularly Franciscans, with their characteristic appreciation of nature, who want to put their knowledge of nature into practice. These three audiences have different expectations of how one should write for them. Maybe I should have written three books, each optimized for its audience, but then I would have given up an important opportunity: stimulating constructive dialogue between them. I want to show that the insights of each group become more significant when they are addressed together. Furthermore, by not presupposing too much of one group's shared expertise, my book becomes suitable also for the non-expert reader.[5]

I write as a scientist who left a respectable mark in science's published record before becoming a Franciscan friar and a Catholic priest. I write as a *dilettante* (which I ask to be taken in the non-pejorative sense) in philosophy. And I write as a Franciscan who, by the standards of my Order and the reasonable expectations of my superiors, still has much to learn about our way of life. Uncharacteristically, for a book with much science, I will not set aside my religious convictions, as I find them helpful. Others will disagree, of course. Nevertheless, I wish to write about scientifically understood nature while neither denying my faith nor, I hope, alienating those who do not share it.

When speaking of nature, physics dominates our understanding like an 800-pound gorilla. But there is another 800-pound gorilla, even stronger and more terrifying: "nature red in tooth and claw."[6] There is rationality in biology, even akin to the well-ordered rationality of mathematics, but here, knowledge of its rationality inspires fear as we see ourselves preordained for a painful death. The incomprehensible and irrational,

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[4] The complexity of what is meant when speaking of nature is well expressed in the essay "Nature" by Robert Spaemann (*A Robert Spaemann Reader: Philosophical Essays on Nature, God, and the Human Person*. Edited and translated by D. C. Schindler and Jeanne Heffernan Schindler. Oxford, UK: Oxford University Press, 2015, 22-36).

[5] I hope my book will not be akin to the fabled German animal called *Wolpertinger*, which is a creature cobbled together of ill-fitting parts of other animals.

[6] Pope Benedict XVI, in Creation and Evolution: A conference with Pope Benedict XVI in Castel Gandolfo (San Francisco: Ignatius Press, 2008), 173.

the "component of terror, which cannot be further analyzed philosophically," is never contained by understanding biology. The fear cannot be taken away, but knowing how humans have responded to it helps us understand its place in human life. Indeed, the phrase "nature red in tooth and claw" is now inseparable from a poem that did just this.[7] I seek knowledge of nature to further human well-being in the broadest possible sense, and I seek to include modern science, but want to put it in its place so that we are not stifled by the fear of meaningless death that it inspires and leads us to flee into irrationality.

My goal is to reconcile the physical sciences with the spirited view of nature resulting from all my insights into nature, including insights from my Christian faith and life as a Franciscan friar. This lets me consider nature to be created by God and deemed good by God, which makes me an optimist regarding nature, even while confronted with the terrible. However, I must be careful in my optimism when thinking of nature, lest it lead me into absurdity.[8] A modern attempt to find anew a romantic understanding of nature must tread more carefully than ever.

Speaking of spirit in nature can quickly lead to misunderstandings. Therefore, when I speak of spirit, I speak of it in a sense that is open to science and scholarship. I mean to speak of spirit in the way the spirit is understood by Edith Stein, an early 20th-century German philosopher of much too insufficient renown.[9] In her native language, she spoke of *Geist*, and the sense of this word is not fully captured by its English translation as spirit. The simplest way to explain the meaning of spirit in the sense of *Geist* is by making an analogy. Spirit is to humanities as *Geist* is to *Geisteswissenschaft*. *Geisteswissenschaft* is the German word for the humanities or human sciences, and it was given its contemporary meaning in 1883 when Wilhelm Dilthey used it to demarcate its sovereign realm next to *Naturwissenschaft* or science of nature.[10] When I speak of reconciling the physical sciences of nature with a spiritual understanding of

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[7] Alfred, Lord Tennyson (1850). "In Memoriam A.H.A."

[8] As immortalized by the character Dr. Pangloss by François-Marie Arouet, aka "M. de Voltaire," in Candide, ou l'Optimisme; traduit de l'allemand de M. le docteur Ralph; avec les additions qu'on a trouvées dans la poche du docteur, lorsqu'il mourut à Minden, l'an de grâce 1759. In the town of Minden, halfway between Hannover and Osnabrück, in 1759, a battle was fought as part of the Seven Year War. This war's least important consequence was the fall of New France in North America, thereby ceding to the English, in Voltaire's words, "a few acres of snow." Yet today, it is home to many, including this writer. The target of Voltaire's wit is not this history but the German philosopher Gottfried Wilhelm Leibniz (1646-1716).

[9] For a book-length biography, see Waltraud Herbstrith, *Edith Stein, a Biography* (San Francisco: Ignatius Press, 1992). For a short biography and a survey of her most important philosophical works, see Antonio Calcagno (25 Aug 2020), "Edith Stein" in *The Routledge Handbook of Phenomenology and Phenomenological Philosophy*. Routledge. Accessed on: 23 Oct 2023. https://www.routledgehandbooks.com/doi/10.4324/9781003084013-62

[10] Wilhelm Dilthey (1883). Einleitung in die Geisteswissenschaften: Versuch einer Grundlegung für das Studium der Gesellschaft und der Geschichte.

nature, I mean a proper human understanding that seeks to be respectful of all elements of the human search for meaning. For how could anybody have trust in knowledge of nature through science and scholarship if it were not meaningful?

"But is this even possible?" a critical reader might now ask. Seeking to understand nature with attentiveness to both physical sciences and the human spirit is akin to reconciling the natural sciences and the humanities. In the 17th century, Leibniz spoke of the kingdom of power and the kingdom of wisdom, and the laws enforced by their kings might be irreconcilable. There's a fable of a frog carrying a scorpion across the water, with the frog accepting the task by naïvely assuming that the scorpion's interest is stronger than its nature. The frog dies mid-water, as does the scorpion after it stings the frog. "It's in my nature," responds the scorpion when the frog wonders why they must now both perish because the scorpion needs to kill when in such proximity to its prey. The reductionist enterprise of modern science must not be expected to desire nothing but a free ride into the hearts and minds of humanities scholars. Strife between them might be necessary for both to thrive. Maybe there must be an unapologetically contradictory mix of insights. This is the third 800-pound gorilla that needs to be feared.

My project began very differently from how it ended. At first, it was a series of essays inspired by the stanzas of the Canticle of Creatures by St. Francis of Assisi. However, with too much time at my disposal during the COVID-19 pandemic, I also read Stein's philosophical books while writing these essays. Stein's work had been on the back of my mind, as Edmund Husserl's "Crisis of European Sciences" had previously caught my attention, especially for its critique of mathematical physics.[11] Knowing that Husserl's last work was a departure from his early works, I wanted to know what his students, which included not only the better-known Martin Heidegger but also Stein, had done with his beginnings. When I arrived at reading Stein's *opus magnum*, "Finite and Eternal Being," I recognized an opportunity to reconcile the knowledge of mathematical physics with knowledge more broadly and articulate the synthesis that I was looking for.[12] Eventually, I abandoned the manuscript already written and began anew. I hope it

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[11] Edmund Husserl, *Die Krisis der europäischen Wissenschaften*. Husserliana VI. (Haag, NL: Martinus Nijhoff, 1954).

[12] Edith Stein, Endliches und ewiges Stein: Versuch eines Aufstiegs zum Sinn des Seins. Edith Stein Gesamtausgabe, Band 11/12 (Freiburg, Germany: Herder, 2007). Translated by Walter Redmond as Finite and Eternal Being: An Attempt to Ascend to the Meaning of Being. Edith Stein: The Complete Works, Vol. 12 (Washington, DC: CUA Press, 2024). Subsequent references to this text are abbreviated EES followed by the page number from the German edition. English quotes from EES are from the Redmond translation, which has the page numbers from the German edition in the margins. When quoting from other works of Stein in my own translation, I followed Redmond's choices for translating her German.

now succeeds in placing my Franciscan intuitions about nature on a sound foundation of science and philosophy.

The Chapters

The Steinian philosophy of nature that is my goal takes her philosophy of being and shows how it integrates different scientific and scholarly insights. It will be a philosophy of nature open to how the human spirit experiences and understands it without fearing that classical metaphysics might diminish the full existential dimension of being. However, I cannot go there right away. My project requires reaching very different audiences with very different insights, and the problems to be resolved—the problems that ultimately led to the deterioration of trust in science and scholarship—need to be addressed from the perspectives of different readers.

The first chapter considers physics and the long-standing problem of how (or whether) the mind can move the body as understood by physics. As an introductory step, I want to show how easy it is to say that there is more to nature than physics, but how difficult it is to make physics fit into this "more." I will look at a small sample of well-known answers to show how none of them truly satisfy. This will conclude with a first look at Stein and what I found in her philosophy.

Then, I turn to the other major challenge for a modern philosophy of nature: the conflict between my intuition of goodness in nature and my being terrified by the suffering I find there. Maybe my faith is wrong, nature is not good, and my intuitions of goodness are wishful thinking. Maybe nature makes no sense, and pursuing my project of a philosophy of nature that has meaningful applications in human life is futile. But too much in nature does make sense, such as when our human nature is compassionate, and we respond meaningfully to suffering. I conclude that due to the conflict between goodness and suffering in nature, only a philosophical understanding of care can ground a philosophy of nature that stands up to modern scrutiny.

The third chapter asks whether a unified scholarly understanding of nature is possible and, if so, desirable. A comprehensive science of sciences was very much the ambition of the early 20th-century circle of philosophers to which Stein belonged. However, especially today, such ambition triggers fears of totalitarian control of the human spirit. Stein's approach, however, need not be feared, as she begins with scholarly communities in their diversity. She finds what is common to them by asking about their formation and nature. This emphasis on the scholarly community looking for understanding avoids the risk of totalitarian thought control from above. Additionally, her work provides a starting point for identifying true scholarship, distinguishing it from

intellectual aberrations, and bringing together results from diverse approaches. Such a unifying synthesis of scholarly insights can guide in times of crisis without ever risking oppressive control of just one way of knowing.

The last chapter of the first part introduces the Franciscan theme. How did St. Francis, the joyful herald of the Gospel from the 13th century, become perceived as a lover of nature and patron saint of ecologists in our time?[13] His life of fraternity, poverty, and itinerancy became a school for understanding human nature in its unity and diversity. Stein's insightful contribution to the nature of community lets us see how the way of life of St. Francis and his brothers leads to an understanding of not only human relationships but also relationships with all creatures and all creation.

After reading these four introductory chapters, I hope that the reader will see the broad scope of questions I wish to engage to understand the spiritual meaning of nature, including human nature and natural human acting. These introductions provide an overview of what must be brought together to understand nature as comprehensively and humanely as possible. But before I move to Stein's philosophy in the second part, I continue with an *excursus* about two recent papal encyclicals that develop Franciscan themes regarding nature and humanity to show how this book's themes resonate with contemporary social and political concerns. This excursus will show the urgency of the problems that confront us today and how much trust in science and scholarship is needed so that we can address them with the full power of human rationality.

The second part will provide the philosophical grounding for understanding nature through scholarly insights from diverse fields. This is Stein's philosophy of being: What does it mean to be? How do truth and goodness relate to being and its meaning? How does this inform our actions? Stein's philosophy of being is a philosophy of care and caring. It defeats skepticism and relativism by providing direction for acting derived from our best insights.

I begin with a first look at Stein's philosophy of being and the close link that she finds between being and meaning. What is has meaning; what has meaning is. One being has a multitude of meanings, and its being is the unfolding of its meaning. Then, I make the case that this is a philosophy of care and caring when applied to our human being. This juxtaposes her with Martin Heidegger, who speaks of *Sorge*, usually translated as care. While Stein does not speak of care as a philosophical concept, the subsequent chapter will show how it is immanent in her work.

This is followed by a chapter exploring the importance of embodiment. Stein's lifelong interest was philosophical anthropology, and as a feminist, she sought to understand the

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[13] For a biography of St. Francis, I recommend Augustine Thompson (2012), *Francis of Assisi : A New Biography* (Ithaca: Cornell University Press).

difference between men and women. She saw it not as norm and divergence but as complementarity and difference. The male-female embodied difference and its place in family life—even after accounting for its distortions by the human propensity toward sin and violence—discloses the importance of caring in the meaning of being. Embodied differences disclose the diversity in which human beings are being called to care.

The fourth and fifth chapters of the second part are about recognizing the individual. I begin with Stein's ontology and her highly original understanding of the relationship between existence and essence or being and meaning. This chapter shows how her modern retrieval of Aristotelianism allows her to reconcile insights from personalism with our objective knowledge of material things. However, while we recognize an individual by its distinctness from us, this recognition does not leave us entirely opposed to the other. The other is not merely different, not just "not I." Instead, the other draws us into what we perceive as comprehensible together with us. In properly responding to the other, our actions are rational—or, in Stein's language, motivated. They are motivated by the perception of values and meaning. Recognizing an individual is always an ethical acknowledgement that requires recognizing a unique value and responding fittingly.

The sixth chapter introduces the Steinian concepts of psyche, soul, and power-to-live. What she calls power-to-live is how living beings are sustained across a span of time, and she concludes that life is not reducible to either matter or spirit. Life and lived experience are the bridge principles between the abstract knowledge of physical sciences and the individual-personal experience of one's own spiritual being. When life is understood on its own terms in the life sphere, it can provide meaningful insights for ethical guidance.

After this presentation of a Steinian philosophy of nature, I can turn to physics. The third part considers what we would conclude if we do not start with a philosophy of being but with the knowledge of physics. If we begin with physics, what lacunae will remain in our understanding of nature, and how can we fill them? This is a way to test whether my Steinian philosophy of being can respond to physical science's challenges. If her philosophy of being is successful, then it will be able to fill these lacunae and give them meaning.

The first chapter of this part considers the relationship between physics and metaphysics and why metaphysics cannot be ignored. Physics provides its own system of deep insights into matter deemed trustworthy because of its internal consistency and empirical success. Importantly, however, it encounters its own incompleteness when describing matter. This incompleteness and its meaning are the topic of the second chapter. The Steinian philosophical context lets us consider matter as incompletely determined by physics. What determines the rest? The third chapter studies how fully determined matter is found in living creatures that maintain themselves out of their own

centre as their meaning is disclosed in time. Fully determined matter is ultimately found in humans, whose spirit brings matter to its full potential by sustaining both life and spirit.

In the last part, I show how this Steinian philosophy of nature leads to practical philosophy and understanding ethical acting in nature. I begin with the Franciscan tradition to provide a context within which Stein's philosophy of care and caring can be applied in life. Of particular importance is the philosophy of Bl. Duns Scotus and his understanding of the rationality of the will. For Scotus, the will is rational when freely choosing well-ordered love. How this love leads to concrete actions depends on our scientific understanding of nature, but the concrete understanding of the demands of this love cannot be derived from science alone. It must be carried by a profound appreciation of the individual in its context.

The second chapter addresses the codification of human rights and their place at the foundation of the modern state. However, what exactly are these rights, and how do they oblige us in service to another? Does the declaration of human rights express an improved understanding of human nature, or is it merely the victory of one political interest group over another? I will show how the Steinian philosophy of nature can make important contributions toward understanding human rights. In the third and final chapter, this will be further expanded to the rights of animals and the environment.

Finally, the book closes with an epilogue on the power of Stein's philosophy to bring together scientific knowledge in its diversity and unity. It lets us apply scientific knowledge of nature without forgetting what else we know.