Stengers Isabelle (2023) Virgin Mary and the Neutrino. Reality in Trouble. Translated by Andrew Goffey. Durham and London: Duke University Press. xii, 250 pages. ISBN: 9781478025207

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What's the difference between the Virgin Mary and a neutrino? This reads like the set-up for a Christmas cracker-worthy joke. In Isabelle Stengers' work, however, the question is of weighty significance, serving as the point of departure for the analysis of one of the most fundamental problems of being in the world. In the secular modern era, the existence of neutrinos is accepted because a scientific apparatus has been created that can reliably prove that the particle is, in fact, part of the fabric of reality. The Virgin Mary, in contrast—alongside other supernatural beings such as ghosts, djinns, demons and spirits—is relegated to the sphere of belief, and thus classified as non-existent. In this schema of thought, the neutrino objectively exists, whilst the Virgin Mary exists only as the subjective creation of Catholic believers. Stengers challenges the intellectual status quo with the contention that the Virgin Mary and neutrinos both objectively exist, though they do so rather differently.

In dialogue with Bruno Latour's work, Stengers develops a way of thinking about various beings in the world that accords them different 'modes of existence' (Latour, 2013; Stengers and Latour, 2015). Both the Virgin Mary and neutrinos form part of our reality because they *matter* to religious practitioners and to scientists respectively. They belong to reality in very different ways, however. In the scientific domain, a neutrino needs a chain of 'reliable witnesses' to exist and an extensive experimental apparatus to be 'conjured'. In the religious sphere, the Virgin Mary is revealed to believers through processes of spiritual transformation, such as pilgrimage, that oblige physical and mental preparations. The scientific particle can be made to appear at will, provided the right experimental conditions: proof of its existence is reproducible, reliable. This is in stark contrast to the Virgin Mary. As a religious being, her visitation—proof of her existence—can never be guaranteed. Believers may invoke her, but that does not necessarily mean she will appear. It would be preposterous to attempt to prove the existence of a neutrino through a spiritual ritual. It follows, then, that we should not try to prove the existence of the Virgin Mary through scientific inquiry. This amounts to a category mistake on a par with attempting to capture an image with a sound-recording device.

In a somewhat counter-intuitive manoeuvre, Stengers establishes the intrinsic differences between neutrinos and the Virgin Mary in order to dissolve typical binaries of thought, such as science vs. religion, rationality vs. irrationality, and objectivity vs subjectivity. Such binaries function as intellectual obstacles to the appreciation of the value and specificity of scientific practices, a core axiom in Stengers work and, indeed, in Latour's. In her reading, scientific practice is dissimilar to all other practices, *pace* relativist approaches of the social constructivism of the late 1990s. This is because, for Stengers, "[n]o practice is like any other" (p. 101). Every practice is *among other practices*—legal, political, ethical, technological. It is unique in the specific obligations it imposes

on its practitioners, and in the specific actions required to enact it but it is one of many other practices that exist. Importantly, the intrinsic heterogeneity of practices must be duly recognized if we wish to describe well all the various beings that matter to us in this world, be they natural, fictional, spiritual or technical.

By turning to beings belonging to spheres that are set at radical opposition in our modern world—religion and science—Stengers opens up new and richer ways of relating to the world. In particular, she leverages the work of ethnopsychiatrist Tobie Nathan (2001) to demonstrate that humans are not alone in the world. This is what the 'cosmo' in Stengers' coinage of 'cosmopolitics' stands for. The philosopher's cosmopolitical approach allows us to attend to the vast array of beings that are meaningfully part of our worlds—from fictional characters to drugs, smartphones, and even the dead—and to find ways to articulate them that are consistent with their unique modes of operation. Such articulation is important because it gives us the tools to understand the elusive yet powerful beings that profoundly impact our lives. This equips us with the ability to negotiate with them, and even protect ourselves from them if necessary.

In this context, Stengers speaks of an 'ecology of practices' as one way of tracing how we are affected by the various non-human entities in our lives and perceiving in more granularity precisely how they matter to us. 'Ecology' is understood here as an approach that would "associate heterogeneous protagonists pursuing divergent interests, united by relations that are not symmetrical, all protagonists making what unites them matter differently" (p. 81). Ecology thus marks the possibility of different beings and different modes of existence to creatively coexist with one another, without the necessity to fuse with each other or dominate one another. This approach does not aim to render religion more scientific (by looking for pieces of Noah's Ark on Mount Ararat, for instance) or science more spiritual (by delving into the divine messaging of cosmic bodies, for example). In the modern world, experimental-theoretical scientific practices have dominated our articulation of beings such as neutrinos, enzymes, and DNA. Such practices dismiss as non-existent all other beings that cannot be articulated in an appropriately scientific manner, including supernatural entities, spirits, ghosts, and so on. With an 'ecology of practices', Stengers offers a powerful alternative, through an interrogation of how existence is produced in specific modes. 'Practice' here is key: a practice is always anchored in a very particular milieu in which a being operates, rather than to any free-floating notion that circulates independent of its local attachments.

Virgin Mary and the Neutrino was first published in French in 2006 in the aftermath of the so-called 'science wars' in the USA, in which the nature of science (whether as a social construct or as a representation of reality) was subject to heated debates. It was translated seventeen years later with some modifications by the author. To be blunt, it is a tough read—both in terms of topic and expression. For a start, the book proposes a radical rethinking of our most basic Western and modern patterns of thought about science and religion, i.e. facts vs. beliefs. The opaque writing style muddies things further. Thinkers in Stengers' immediate intellectual circle, like Latour or Vinciane Despret, write in a more reader-friendly mode, taking pains to walk readers through the theoretical mazes constructed in their work. Stengers is not interested in such hand-holding that would allow readers to navigate the crucial intellectual conundrum she delineates. Readers must either be intimately familiar with the literature and debates to which Stengers refers throughout the book, or, ideally, have read Latour and Despret to fully grasp the stakes and the importance of the analysis at hand. For this reason, it is perhaps most fruitful to read this book together with other texts, notably those by Latour, Despret, Haraway, and Nathan—and treat Stengers' work here as an 'entangled flight' (Pignarre, 2023). What hasn't been directly expressed in this book, is most likely addressed, albeit with a twist, in Latour or Despret. Nevertheless, the intellectual entanglement evident in the book's argumentation does not make its core analytical thrust any less fascinating, thought-provoking or inspiring. On the contrary, it serves to unite an assembly of thinkers that resonate with each other and, thereby, reciprocally extend the remit of each other's works in a truly ecological way. In this volume, then, we witness how innovative intellectual endeavour always happens with and through others.

References

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