

The Development of Modern Science and the Dawn of the Existential Angst

In his essay “Is God a Mathematician? The Meaning of Metabolism,” Hans Jonas responds to a claim made by Sir James Jean that, in light of modern science, God is only a mathematician.¹ He does this by giving an overview of what it would mean if God were merely a mathematician and discussing whether this view is accurate. This idea of a purely mathematical God is born out of the progress of modern science and the idea that any motion in the universe is a direct consequence of the motion which preceded it. According to the latter view, every event is able to be calculated and predicted, and the essence of a thing is able to be reduced to the motion of its smallest part. Over the course of his essay, Jonas describes the evolution of mathematics throughout history and specifically the changes it underwent as modern science emerged. He then highlights how this evolution led to the idea that God is purely a mathematician. Jonas criticizes the view that God is purely a mathematician by drawing attention to those things in the world which cannot be explained by this view. He concludes that God cannot be only a mathematician. There is, however, a problem in this mathematical view of the world which Jonas does not detail in his essay. Specifically, accepting God only as a mathematician and viewing the world only in the way modern science dictates leads to a form angst associated with existentialism.

To understand the problem with the claim that God is ultimately only a mathematician, the way in which modern science leads to this claim must first be understood. Jonas explains how modern science or mathematics views the world as follows. First, he describes how the turn to measuring motion rather than pattern and the emphasis on motion as the fundamental knowable plane of understanding in physics marked the difference between the ancient view and

¹ Jonas, *The Phenomenon of Life*, 64.

the modern view of mathematics.² Next, Jonas notes that “Kepler was probably the first of the moderns to declare quantity (or magnitude) to be the, at once, essential and truly knowable aspect of reality.”³ So, physical objects are no longer understood and quantified merely as static objects. Rather, the motion in which they participate is understood as a characteristic which is inseparable from the object itself. As a result, the focus of modern science is on the measurable motion and path of a thing, rather than the whole of the thing or organism itself. So, in something that is complex, such as a living organism, the studied entity is reduced to the motion of its parts instead of being understood as one single, unified whole. As a result, what is most intelligible is effectively reversed from the ancient understanding to the modern understanding of things. Thus, Jonas observes that “with the whole now to be explained by the parts, intelligibility means reducibility to that which as elemental, is in the older sense least intelligible, because it least involves intelligence for its own performance.”⁴ The motion or action of a living thing as a whole is no longer seen as one act performed by that living thing. Rather, the action is the cumulation of many individual reactions which result from the motion of each individual particle within the living thing. As a result, all things that can be known are reducible to the law of inertia.

At a later point in his essay, Jonas discusses the idea of the soul and the mind. According to the Greeks, intelligence provides what is rational in motion. Any motion which is ordered and obeys a law must have some form of intelligence providing the order and law. So, the degree to which a motion is ordered or law-abiding is directly correlated with the degree of intelligence which initiates that motion.⁵ According to Christian theology, the mind or soul of a human being

² Jonas, *The Phenomenon of Life*, 67.

³ Jonas, *The Phenomenon of Life*, 67.

⁴ Jonas, *The Phenomenon of Life*, 69.

⁵ Jonas, *The Phenomenon of Life*, 70.

is separate from the physical body. As Jonas notes, “the essential division between God and world is thus repeated or mirrored in the essential division between mind and nature.”⁶ The Christian view is similar to the Greek view in that God governs the universe and provides the laws followed by the universe such that He is the intelligence which provides the rationality of all motion in nature. In an analogous way, the soul of a human being dictates the motion or action of the individual, and thus the soul provides the rationality behind human action.

Even according to Descartes (though the specifics of his view regarding this idea are very different from those which came before him), the capacity for thought and understanding in a human being is separate from the physical nature of a human being.⁷ On Descartes’s view, there are two sides of reality: there is the side pertaining to nature (that is the physical world), and there is the side pertaining to the soul, the mind, and what is intelligent. However, insofar as modern science reduces all knowable things to the law of inertia, the scientific world view eventually reduces the mind itself to the motion of individual particles, and this motion is lacking in intelligence. The reason that particles that merely obey the law of inertia lack intelligence is that the cause of their motion is not initiated by an intelligent being. The motion of a particle is the direct result of its interaction with another particle and the physical properties of the two. There is nothing outside of the particle's physical interactions which determines any part of its motion, and as a result, because intelligence is something beyond the physical, there is no intelligent influence on the particle. And because there is no intelligent influence on the particle, the motion of the particle is unintelligent and thus irrational. Ultimately, then, the object of modern, scientific reason is the irrational, and the only intelligible thing is the unintelligent.⁸

⁶ Jonas, *The Phenomenon of Life*, 71.

⁷ Jonas, *The Phenomenon of Life*, 72.

⁸ Jonas, *The Phenomenon of Life*, 73.

Further, “since mind has retained no standing at all in the system of those rational objects which constitute Descartes' Nature [that which is knowable by modern science]... there ensues the paradox that reason itself has become an irrational entity, intelligence entirely unintelligible within the intellectual scheme of the scientifically knowable.”⁹ The mind cannot comprehend itself, reason is wholly hidden from the reasoner, and intelligence is unable to see the intelligent. The immaterial side of man is wholly hidden from his understanding and remains as an unsolvable mystery because the immaterial is beyond what modern science accepts as knowable. The human being's understanding of himself is reduced to the mere biochemical pathways of his physical being.

The human being's inability to understand itself in and through modern science was one cause of existential philosophy—a movement that emerged shortly after modern science emerged as the authoritative source of human knowledge. Because accepting modern science claims to offer a rational account of the human being that ultimately makes humans incapable of understanding themselves as wholes, the modern scientific worldview is problematic not only because it is incomplete (detailed later in Jonas's essay), but also because it leads to a disparity in the perceived purpose or meaning and the actual purpose or meaning of human life. For example, throughout the novel *Notes from Underground* by Fyodor Dostoevsky, the narrator describes how the supposedly predetermined character of the world, makes it seem that his actions and his life have no meaning. However, the narrator maintains the desire and capacity for meaning.¹⁰ (Dostoevsky, *Notes from Underground*, 24-41). The result of this disparity is an overwhelming sense of anxiety and an unavoidable but empty search for the purpose and meaning of human existence.

⁹ Jonas, *The Phenomenon of Life*, 73-74.

¹⁰ Dostoevsky, *Notes from Underground*, 24-41

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