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Piotr Roszak
Saša Horvat

Overcoming Reductionism and Crafting a New Synthesis

Theodicy Confronting Pain and Suffering

Springer

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Volume 14

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“It is not a reason that is against faith, but our imagination.”
(John H. Newman)

To Tanja, bearer of my meaning.
S.H.

Introduction

While science has traditionally been seen by many as the catalyst for unbelief and atheism, recent years have witnessed substantial shifts that challenge the persistent notion of an ongoing conflict, which has been shown to be both inaccurate and detrimental to deeper understanding. Some propose a solution of dividing the domain, with science addressing one aspect and theology another, in line with the principles of NOMA (Non-Overlapping Magisteria). Can the explanations provided by science render philosophical and theological dilemmas redundant, leaving no room for alternative interpretations? In the realm of suffering and pain, can we simply differentiate between a scientific explanation on one hand and a theological explanation on the other, treating them as parallel and unrelated? Increasingly, it appears that such a simplistic view, where two parallel paths are assumed, falls short of scrutiny. There is a growing call for a theology that engages with science, driven by various reasons, including theological considerations, to foster fruitful and profound reflection. This situation echoes the age-old dilemma faced by generations of exegetes when interpreting the Bible: should one prioritize the literal sense or the allegorical sense? The response, advocated by thinkers such as Thomas Aquinas and supported by these authors, is distinct: not one or the other, but a harmonious interplay between the two.

In this context, reductionism, which aims to simplify everything into a single statement, is viewed as potentially obstructive when attempting to comprehensively elucidate complex human phenomena, such as suffering and pain. To explain a phenomenon means not only revealing its origin and how it assumed a particular form but also uncovering its purpose. Thus, there can be both "backward" explanations that delve into its genesis and "forward" explanations that shed light on its intended purpose. Unfortunately, contemporary resistance to the notion of final causation, despite its prominence in Aristotle and classical philosophy, has implications for the prevailing mindset: the prevailing belief is that true understanding is achieved by knowing the causal chain of how something came into existence. However, it becomes evident that such an answer falls short when contemplating the existence of evil, whether of natural or existential origin, which profoundly affects one's life.

So, can we transcend the dominance of reductionism in modern science? This book, which places the theme of suffering and pain at its core, strives to illustrate the insufficiency of reductionist explanations and the receptiveness of modern science to alternative approaches, including theological explanations. But what exactly is the form of reductionism discussed within the context of this book?

Reductionism operates under the premise of the unity of science and takes on various forms, including the translation model, the derivation model, and the explanation model (Ney online).

In the translation model, the objective is to distill everything into a singular, objective language (as advocated by R. Carnap) that is devoid of subjectivity, thereby eliminating redundant theories. This approach inherently raises implicit metaphysical questions, a concern that figures like O. Neurath rejected, exemplified by his well-known metaphor of "changing the ship's parts while at sea." These questions revolve around our understanding of the world and reality. The logical positivists, for instance, aimed to create a language through reductionism that minimized ambiguity and facilitated intersubjective communication.

In the derivation model, the foundation of reality appears to rest on a single overarching theory, from which other theories emerge. Ernest Nagel, for instance, envisioned "a comprehensive theory which will integrate all domains of natural science in terms of a common set of principles" (1961, p. 336). Bridge laws, particularly at the terminological level, play a crucial role in bridging base science with target science to facilitate this integration.

Conversely, the explanation form of reductionism, associated with John Kemeny and Paul Oppenheim, seeks to explain observations without the necessity of theoretical assumptions. This approach primarily focuses on eliminating theories that are deemed explanatorily redundant, emphasizing a form of theoretical parsimony through elimination. It's worth noting that not all proponents of this theory have consistently followed this path. Nevertheless, this approach appears to have exerted the most significant influence in the latter half of the twentieth century.

Hence, the concept of reductionism, which entails breaking down complex phenomena into smaller components, is not a recent development; it can be traced back to the nineteenth century. During this period, there was an endeavor to apply Newton's physics to chemical processes, which subsequently found its way into the realm of social sciences through Marxism's reductionist interpretation of social phenomena. Different forms of reductionism, including teleological reductionism, have since emerged. Teleological reductionism, for instance, concentrates exclusively on the end goal while disregarding other elements as irrelevant. This approach has implications, notably in the field of education.

The focus of this book centers on the case study of pain and suffering, which necessitates comprehensive understanding, viewing it not solely through the lens of the material substrate but in its broader context. Many phenomena, particularly those pertaining to the human spirit, defy explanation through reductionism. An illustrative example is poetry, which some might view as a haphazard arrangement of words. However, grasping its essence demands a certain level of sensitivity and a meta-perspective, recognizing that not everything is as self-evident.

Chapter 1 delves into the historical and philosophical factors that played a role in the development of reductionism within the realm of scientific methodology. This exploration encompasses two significant facets: firstly, the shift away from the scholastic scientific model in favor of embracing the so-called "principle of sufficient reason," which, in practice, narrowed the scope of causality. Consequently, various forms of reductionism, spanning from epistemological to ontological, emerged, and these were closely intertwined with the principles of methodological naturalism. Confronted with the limitations and dissatisfaction inherent in reductionism's descriptions, there have been calls to transcend this approach by opening it up to transcendental explanations.

Hence, in Chap. 2, we delve into the necessity for incorporating theological explanations within the realm of science. We explore the various forms these explanations take, often influencing scientific assumptions and steering the direction of inquiry. Conversely, a theology that embraces the accomplishments of the sciences enhances the way it shapes its assertions. As we examine contemporary metaphors that depict the relationship between science and theology, we place particular emphasis on the imagery of two distinct "books" and "languages." While these metaphors have been present from the outset, their perception has evolved in the modern era. These reflections on the framework and interconnectedness of these two modes of explanation pave the way for in-depth discussions on pain in the subsequent chapters of this book.

Chapter 3 prepares the task of demonstrating how theological and philosophical reflections can be integrated with scientific insights to achieve a more comprehensive understanding of specific phenomena. In humanity's enduring pursuit of meaning, theodicy, which seeks to reconcile the existence of a benevolent God with a world characterized by suffering and pain, often becomes entangled in metaphysical theories and logical coherence. This complexity can result in a disconnect from tangible human experiences of pain in everyday life. Therefore, Chap. 4 seeks to initiate its exploration from the perspective of scientific knowledge concerning pain, drawing from fields such as evolutionary medicine, biology, cognitive science, and related disciplines. In Chap. 5, we delve into the neuronal correlation between pain and suffering, examining not only their connection but also exploring the evolutionary trajectory of pain and life. In Chap. 6, by leveraging contemporary scientific findings that emphasize the strong interconnection between life and pain, the goal is to establish a foundation for further discussions on theodicy. In conclusion, as we turn our gaze toward the future of theodicy and theology, this undertaking seeks to lend support to the concept known as "The Dynamic Theodicy Model," as conceptualized within the project.

The book incorporates excerpts from the authors' previously published works, contextualizing them within the framework of a discourse centered on reductionism. In Chap. 2, numerous ideas are drawn from articles published in the *European Journal of Science and Theology* (Roszak 2023, pp. 1–12), as well as an essay from a collective book originally published in Polish (Roszak 2021, pp. 31–55), which explores the impact of science on theology. The last four chapters further develop certain ideas stated in the article published in *Religions* (Horvat 2023).

In the face of the prevailing reductionist perspective, it often appears as though humanity's timeless inquiries have been definitively resolved. The prevailing notion is that, since we possess knowledge regarding the brain's structure and the processes underlying various phenomena, we have comprehensive understanding. Furthermore, as religion encompasses cognitive aspects, some regard it as nothing more than an extension of cognitive science. The implication is that if we comprehend how the brain functions when an individual experiences love or suffers, we have unlocked the reasons behind love and suffering.

However, this book is crafted for those who recognize that such an explanation falls short, representing a step in the right direction yet perilously halting midway. So-called "partial" answers that assert their exhaustiveness and completeness are treacherous because they discourage further contemplation and reflection.

In previous circumstances, during times of confusion, people have crafted "guides for the perplexed," drawing inspiration from figures like Moses Maimonides (2015). These guides have consisted of advice and comprehensive explanations designed to lead individuals out of uncertainty and to present the world not from a specific perspective but in its entirety. In a way, this book serves as such a guide: it endeavors to elucidate the emergence of reductionism in modern science while simultaneously emphasizing the importance of not stagnating at that point but progressing further.

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Contents

Chapter 1
Genealogy of Reductionism, Why Shortcuts Don't Pay Off

When examining the relationship between religion and science, many scholars emphasize the need to move beyond established frameworks such as Ian Barbour's (2000) quadruple classification (conflict, independence, integration, and dialogue) or John Haught's 4 × C model (conflict, contrast, contact, and confirmation) (Haught 1995). These frameworks describe various ways in which religion and science interact, but a deeper understanding is required, one that transcends the notion of separate "territories" of science, as proposed by Peter Harrison. These territories imply independent domains with limited interaction.

In contemporary discussions, there are numerous efforts to move beyond the simple dichotomy of faith and science. These efforts aim to foster integration between the two domains and introduce new approaches to understanding nature and the conveyance of truth, emphasizing that truth is not solely expressed through formulas but also through religious and scientific practices, as articulated by Rowan Williams (Williams 2022, pp. 201–215; Harrison and Tyson 2022).

Nevertheless, the obstacle hindering this progress appears to be the lingering reductionist mindset inherited from the modern era. This mindset prioritizes the search for a "sufficient reason" rather than a comprehensive understanding of causality, thereby impeding the transition towards a more integrated relationship between religion and science.

Nonetheless, the current perspective on science, rooted in the *complexity paradigm* (Czarnecka 2013, pp. 183–196), necessitates broadening the limited framework centered on the principle of sufficient reason. The goal here isn't to discard this principle entirely but rather to avoid its absolutization and transition from merely capturing associations to providing a causal explanation of the world (Pereda 2014, pp. 125–137). Employing such a reductionist viewpoint, although it has led to certain advancements, has, in a sense, severed a portion of reality by deeming it as absent. This phenomenon is something we encounter in our everyday lives: if we

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cease discussing something, even if it remains physically present, over time, many individuals tend to perceive it as if it has simply vanished.[1]

The initial steps toward this disconnection and departure from a holistic *Summa* perspective originated toward the end of the Middle Ages. This transformation had a significant impact on the very concept of causality (see Dodds 2017). It was not without consequences for the imaginative faculties crucial to the progression of science, which began to yield to reductionist tendencies. As the focus became increasingly fixated on pivotal factors, the appreciation for the entirety of reality gradually faded from the realm of imagination.

Hence, a pressing challenge lies in reinvigorating this imaginative capacity to better serve the cause of dialogue. This pertains not only to fostering a new imagination regarding nature, as proposed by Alister McGrath (2017), but also in relation to grace, in order to be correctly understood by contemporaries (see Steeves 2016).

1.1 Modern Decompression in Science and Theology: Bach's Key or Occam's Razor?

Scholasticism addressed dilemmas not only through direct engagement, which involved referencing arguments within disputations or quaestiones, but also through its broader architectural arrangement, as exemplified by the *Summa of Theology*. With the increasing significance of Aristotle's influence and the advancement of scientific thought rooted in his philosophy (to the extent that mentioning Aristotle in medieval texts essentially equated to invoking 'science'), theology faced the challenge of presenting a coherent framework of knowledge.

Hence, the decision to create the *Summa* represented a methodological choice that provided a comprehensive structure in which specific issues could achieve greater clarity. For instance, the inclusion of reflections on topics such as the cardinal virtues in the *Summa of Theology* already constituted a response to the question of whether they could exist independently of grace. Simultaneously, this ongoing interaction between theology and scientific progress liberated theology from insular thinking, enabling it to embrace new concerns and evolve into a discourse that addressed genuine issues ingrained in the prevailing worldview.

Aquinas intriguingly cites arguments from 'science,' not in opposition to his own theological standpoint but rather as endorsements of his theological reasoning. These analogies and references to science, introduced in his writings with the specific formula "*ut scientia dicit*," largely serve to validate his theological arguments. Thomas doesn't disregard scientific discoveries in an effort to relegate theology to

[1] Contemporary theories of communication seem to confirm this, hence the great pressure to maintain the presence of a given topic in the media, sometimes even artificial, but it is important to "talk" about a given topic.

the fringes of scientific knowledge. On the contrary, he firmly believes in the worth of theological science.

An illustrative example of this can be found in his contemplations within the initial chapters of the second book of the *Summa contra Gentiles*. Here, he boldly ventures to draw parallels between scientific cognition and the way in which God perceives the world. The act of seeing the world as it truly is, a type of knowledge characteristic of God, serves as a model for the harmonious coexistence of scientific and religious cognition. This perspective values diversity while seeking coherence and a holistic view.

Frequently, the issue doesn't arise from an error concerning specific details but from an incomplete exposition, a premature halt, or the hasty reduction of intricate structures to a single, simplistic answer. Subsequently, individuals may cease their inquiry, much like someone who, after learning the outcome of a football match, loses interest in further exploration. Hence, the evolution of the relationship between science and religion is not primarily marked by challenges stemming from the emergence of new data from scientific discoveries. Instead, it often hinges on the absence of their integration and the tendency to adopt a one-dimensional methodological viewpoint that excludes alternative perspectives. This phenomenon bears similarities to past instances, such as empiricism (see: Szulakiewicz 2019).

This ability to perceive the entirety within its constituent parts, to discern the root cause within the resulting effect, profoundly influenced medieval thinking. It underpinned the audacious notion that no dimension should be omitted, for the entirety forms an intricate tapestry where exclusively focusing on the 'grand' while disregarding the 'minor' elements distorts the proportions and, under specific circumstances, leads to explanatory deficiencies. While the Great Wall of China is visible from space, this does not imply it's the sole such structure on our planet. Nevertheless, during the late Middle Ages, there was a concept of excising seemingly irrelevant aspects, a form of intellectual pruning, to streamline explanations to a form of reasoning that, unembellished, resolves the perplexing. Ockham's principle of intellectual parsimony, which sanctions the simplest explanation without introducing additional entities or constructs, became an influential methodological approach (see Gernert 2009, pp. 133–138). This modern perspective, rooted in medieval thought, came to dominate scientific practice, albeit not exclusively or comprehensively representing the era. Its ascendancy had its origins in the late Middle Ages but found fuller expression in the sixteenth-century discourse, with the 'principle of sufficient reason' at its forefront.

However, the principle of sufficient reason is only one part of the narrative. It's akin to reading a novel and glossing over descriptions of nature, deeming them irrelevant to the plot, keeping one's focus exclusively on the narrative's details or circumstances. Or, to extend the analogy, it's like watching a football match solely to identify the goal scorer, forgetting that the field teems with players beyond the one whose name appears on the scoreboard. While it's conceivable to attribute victory in a sporting contest to the goal scorer, aficionados of the sport understand that the entire team contributes to the game, including those who don't physically interact with the ball but influence the field's dynamics. One might assert that no other

players matter, that only the goal scorer is significant, but such reductionism disregards the holistic perspective.

John Milbank recently introduced a reevaluation of this process, grounded in the well-known concepts of disenchantment and enchantment, but within the context of transcendence (Milbank 2022). Milbank advocates a shift from 'disenchanted' to 'enchanted' transcendence. He reminds if when talking about nature we merely point to God, as if nature was a simply 'reference' to distant God, a historical tendency seen in the Christian tradition's treatment of nature, which led to its disenchantment. Instead, Milbank proposes to focus on uncovering sacramental aspect of nature that demonstrate a God's presence in our world (Roszak 2021). In practical terms, as pointed out by Tom McLeish, this represents a departure from viewing the science-religion relationship as a mapped terrain with fixed boundaries to an approach that transcends its limits (see McLeish 2022, p. 334).

This approach does not entail the subjugation of religion to science, as some interpretations of NOMA (Non-Overlapping Magisteria) imply, nor does it involve subordinating science to religion, as suggested by creationists. The ideal of collaboration embodies a form of wisdom that acknowledges the inherent metaphysical underpinnings in science while concurrently embracing a multifaceted perspective of reality.

Nonetheless, in the context of the prevalent 'Ockham's razor' paradigm, Robert Spaemann presents a thought-provoking alternative perspective. Spaemann highlights that our quest is not solely focused on pitting competing explanations against each other, where one eliminates the other as superfluous and irrelevant through the metaphorical 'razor.' Instead, it underscores that while certain information may be 'sufficient' for comprehending the underlying processes or phenomena, it might also harbor a latent meaning that can be deciphered by entities possessing such decoding capabilities.

It is through contemplation of information and meaning that we gain insight into why God and His actions elude the reductionist tendencies of Ockham's razor. In the context of this argument, R. Spaemann articulates his point by referencing a specific composition by Johann Sebastian Bach.

> A few years ago, in a score for violin written by Bach, a double code was discovered: if one assigns to each interval (semitone) a letter of the Latin alphabet, and joins together the first notes of each bar, one gets the phrase: *Ex Deo nascimur, in Christo morimur, per Spiritum Sanctum reviviscimus* [From God we are born, in Christ we die, through the Holy Spirit we are revived – PR]. The score contains a notation of a beautiful melody. The musicality of this structure is enough to understand why Bach did not reveal a second, hidden meaning. But whoever, following an ancient rumour, imagines that there is something more and begins to search for the hidden message by mastering Latin, faces to his surprise an unexpected dimension. Fortunately, Bach scholars have not been intimidated by "Ockham's razor" (Spaemann 2006).

So, the issue is not so much a matter of selecting one over the other but rather progressing 'through' one to the other. In other words, it involves transitioning from scientific exploration of the world towards the another dimension that carries a distinct significance and vice versa. A parallel approach was taken in medieval biblical