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The ‘Siloization’ of Sciences

Causing a Lack of Meaning for Life

Adriaan Jeroen Toonen
(OKAYAMA UNIVERSITY)

INTRODUCTION

In his later work, *The Crisis of European Sciences and Transcendental Phenomenology*, Husserl put forward a notion of the Crisis, which, prima facie, has two faces. On the one hand, it is a crisis of the sciences, as Husserl states: “This is a crisis which does not encroach upon the theoretical and practical successes of the special sciences; yet it shakes to the foundations the whole meaning of their truth” (Husserl, 1970, p. 12). On the other hand, it results in a crisis of meaningfulness for life, as Husserl states: “...concerns not the scientific character of the sciences but rather what they (...) mean for human existence” (Husserl, 1970, p. 5).

Until this point, commentators have understood Husserl’s notion of crisis as a twofold crisis, reading these and other relevant passages straightforwardly. Let us call this interpretation *traditional*, as it has been supported by influential scholars such as David Carr and Aron Gurwitsch. I attribute Trizio’s reading to the *skeptical reading*, as his refusal to affirm the causality proposed by the traditional reading reflects a skeptical stance, questioning the linkage between the two crises. I call Heffernan’s reading the *inclusive reading* because it broadens the scope of the crisis to include humanity, framing the crisis of the sciences as a symptom of a deeper, all-encompassing crisis.

After establishing this debate on the meaning of the crisis, I shift the focus to philosophy’s role in addressing it. I argue that *The Crisis* underscores a deeper and inherent problem: the ‘siloization’ of the sciences. By engaging with interpretations by scholars such as Carr and Gurwitsch, I seek to demonstrate how philosophy can reclaim the foundational role for the

sciences. Ultimately, by contending that only through rigorous, self-responsible philosophy can the crises of science and humanity be abated. This demand for a return to universal philosophy is perhaps at odds with contemporary philosophy, yet Husserl’s entire oeuvre embodies it.

With this paper, I aim to lay bare the ambiguities in the interpretations of the crisis, to be discussed in Chapter 1, and highlight the contested nature of the debate in recent years. This discussion is essential as it reveals what is contested and why, providing readers with a thorough understanding of the current debate. Crucially, these contested interpretations often overlook the role of philosophy, which is central to Husserl's work. Husserl focused on the necessity for philosophy to reclaim its mantle of universality in a rigorous and methodological manner, freeing us from the dominance of scientific discourse and providing the essential grounding for meaningfulness in life. Thus, my paper continues Husserl's thought, mirroring aspects of the traditional approach, which is often forgotten in contemporary philosophical discourse.

In Chapter 2, I present a comprehensive analysis of the dominance of the sciences in our lives and propose a remedy rooted in Husserl's oeuvre. The *role* of philosophy must be taken seriously as a science itself, maintaining rigor and methodology while avoiding the pitfalls of specialization. Philosophy should once again take up its role, its self-responsibility; only then is it able to provide universal grounding.

CHAPTER 1 ‘THE CRISIS OF THE SCIENCES EXPLAINED’

This chapter aims to provide a framework for understanding the meaning of the crisis with respect to the current debate. Emphasis is placed on *The Crisis* Part One, which provides the groundwork for Husserl’s deeper exploration into the crisis. This chapter contains three interpretations of the crisis, namely the traditional, the skeptical, and the inclusive readings. While the traditional approach, or de facto approach, is widely accepted by scholars, the skeptical and inclusive interpretations are each attributed to a single scholar.

This chapter begins by providing a short summary of all three interpretations followed by the causal relation argument, as such a structure sets the stage for a deeper investigation into all three interpretations, concluding with a final analysis. The main purpose of this chapter is to

provide an in-depth analysis of the current debate concerning the Crisis, laying the groundwork for exploring philosophy's role in addressing it in the next chapter.

1.1 The causal relation

Before offering a detailed analysis of the current debate concerning the meaning of the Crisis, I provide the following table that offers an overview of the key interpretations, their proponents, and their stance on causality.

INTERPRETATIONS	PHILOSOPHER(S)	WHAT IS AT STAKE?	CAUSE
Traditional	Carr, Paci, Boehm, Ströker	Crisis of humanity caused by crisis of the sciences	CAUSE
Skeptical (2016)	Trizio	Crisis of the sciences *alone*	N/A
Inclusive (2017)	Heffernan	Crisis of humanity & ensuing crisis of the sciences	SYMPTOM

1.2 Traditional interpretation

As mentioned previously, the traditional reading was until recently the prevalent interpretation of the crisis of the sciences. *The Crisis of the European Sciences* is concerned with the loss of meaningfulness for life caused by the crisis of the sciences. A substantial group of scholars can be attributed to the traditional approach, notably Aron Gurwitsch, Enzo Paci, Elisabeth Ströker, and David Carr. Ströker encapsulates the central idea of this interpretation in a single sentence:

> Diese Krise betraf selbstverständlich nicht die niemals an gezweifelte Wissenschaftlichkeit der Wissenschaften, „sondern das, was sie, was Wissenschaft überhaupt, dem menschlichen Dasein bedeutet hatte und bedeuten kann. (Ströker, 1988, p. 207)

She evidently shows a direct causal relationship between the sciences and meaningfulness for life. Such a relationship is further corroborated by David Carr's translation of *The Crisis*,

stating:

> In describing the crisis itself, he [Husserl] refers to the "younger generation's" justified hostility toward the science of the nineteenth and twentieth centuries. "In our vital need—so we are told—this science has nothing to say to us" (Husserl, 1970, p. XXIV)

The scholar Enzo Paci shares this existential idea, leading him to refrain from putting all the emphasis on the crisis of the sciences *an sich*. He puts the meaning of the sciences for life at the center of the debate by claiming:

> Husserl recognizes that scientists, sure of their method, have some reason for protesting against those who speak of the crisis of science. The crisis of which Husserl speaks, however, does not concern the sciences as such. Rather, it concerns what they could have meant and what they could mean for human existence. (Paci, 1972, p. 3)

Aron Gurwitsch further emphasizes that the crisis of the sciences is predicated on a lack of understandability of the output of the scientific product. In other words, the facts that they produce are 'ununderstandable', because "...there is no room for the norms and ideas of reason (...) [s]cience, it seems, has nothing to say as to things that matter most for human existence." (Gurwitsch, 1956, p. 383) In essence, the crisis has its foundation in the absence of a universal philosophy to ground science. Without it, the loss of meaningfulness for life is in play, as science is no longer directed by a force greater than its own. As a result, the crisis of humanity is not just a consequence but a certain outcome.

1.3 Skeptical interpretation

Recently, divergent interpretations have emerged that challenge the traditional reading. One of these perspectives is put forward by Emiliano Trizio. While he aligns with the traditional view that the Crisis originates as a crisis within the sciences, he presents a skeptical reading that provides a robust framework of first- and second-sense scientificity. In this framework, the crisis of the sciences is attributed to the loss of second-sense scientificity—a concept that will be discussed in more detail later. However, Trizio deviates from the traditional interpretation by rejecting the suggested causation between the crisis of the sciences and the crisis of humanity. Trizio contends that "...this Sinn should not be lumped together with the broader

and less technical notion of Sinn which concerns (...) the sense of human existence..." (Trizio, 2016, p. 202). Such a statement illustrates Trizio's reluctance to include the existential claim of a loss of meaningfulness for life proposed by the traditional reading. In this light, and given the ambiguity of the text, he argues that such a claim alone is insufficient to fully infer the meaningfulness of science for life.

The key for this reluctance—to attribute the loss of meaningfulness for life to the sciences—by the skeptical interpretation is found in §2, which nevertheless appears to counter Trizio's non-causative argument:

> It [the crisis] concerns not the scientific character of the sciences but rather what they, or what science in general, had meant and could mean for human existence. (Husserl, 1970, p. 5)

The skeptical reading brings Carr's translation into question, as the English translation uses the contextually rich word 'meaning' to describe the German words *'Bedeutung'* and *'Lebensbedeutsamkeit'*. In contrast, the French translation by Gérard Granel translates 'Lebensbedeutsamkeit' as '*importance pour la vie'* (Granel, 1976), which, according to Trizio better conveys its intended context and resolves the ambiguity (Trizio, 2016, p. 197).

The reason for the crisis, according to Trizio, is a lack of scientificity—not in the *first* sense, as the sciences are nothing more than "...truth-seeking techniques (prima facie scientificity) (...) [that can only arrive at] blindly yielding truths" (Trizio, 2016, p. 204). But in the *second* sense, which Trizio terms 'authentic' scientificity, concerned with techniques that are able to derive the deeper structures that underlie these facts produced in the first sense.[1] In short, science fails to understand what it is based upon.

The traditional interpretation, in contrast with the skeptical interpretation, roots the crisis in the loss of meaningfulness for life. By acknowledging the lack of scientificity and its ramifications in terms of the loss of meaningfulness for life, as Husserl argues: "What does science have to say about reason and unreason or about us men as subjects of this freedom?" (Husserl, 1970, p. 6). This question highlights the ambiguity of Husserl's title, marking a key

1. *First sense* and *second sense* scientificity will be used interchangeably with *first* and *second-order* scientificity. Both *genuine* and *authentic* science are of the second-order, or second sense scientificity.

distinction between the skeptical and traditional interpretations.

> Paragraph 2 of Crisis provides clues for not including meaningfulness for life in the skeptical reading. The title of the paragraph here plays an important role: "The positivistic reduction of the idea of science to mere factual science. The "crisis" of science as the loss of its meaning for life [Die positivistische Reduktion der Idee der Wissenschaft auf bloße Tatsachenwissenschaft. Die „Krisis" der Wissenschaft als Verlust ihrer Lebensbedeutsamkeit]" (Hua VI, p. 3) Trizio specifically focuses on the title, asserting the following: Contrary to what many readers [the traditional reading] have thought, the second part of the title only describes how the current state of science happens to be perceived (...) indicated by the fact that the word crisis now appears between quotation marks, (...) Husserl marks a certain distance from what is being asserted... (Trizio, 2016, p. 196)

Trizio argues that Husserl's words cannot simply be accepted at face value. The existential character of this paragraph merely reflects Husserl's own realizations. However, Trizio takes issue with the traditional interpretation, as it finds evidence in §2 for a causality between the crisis of the sciences and the crisis of humanity.

> Reversely, the skeptical reading directs us to a lack of scientificity within the sciences, which is divided by first and second sense of scientificity. To not bury the lead, the skeptical interpretation states that the first sense of scientificity is not in question; the second sense is. Below is an indication of the meaning of scientificity according to the skeptical approach: What makes a science a science is its scientificity, and a science whose scientificity has become questionable is a science whose very identity as a science is in question. The question is: is this a real, genuine, science? (Trizio, 2022, p. 314)

The skeptical approach aligns with Husserl's claim that first-sense scientificity is uncontested, since the successes and rigor of scientific methodology are undeniable (Husserl, 1970, p. 4). Conversely: "...philosophy is in crisis because its scientificity appears hopelessly missing..." (Trizio, 2022, p. 314).

But why are the sciences, in the first-sense—or prima facie—unquestionable? Because first-sense scientificity concerns solely science's methodology and the subsequent empirical results it provides, such as controlled experiments. What is in question, rather, is the level above it—

second-sense scientificity—whose function to provide grounding has been lost. Our discussion on scientificity continues later on in this paper.

The term 'Lebensdeutsamkeit' in §2 is as a '*dramatis persona'*, a rhetorical device illustrating the idea that the positive sciences have lost their significance or meaningfulness for life. Both the traditional and inclusive interpretation accept the term 'Lebensbedeutsamkeit' at face value and attribute the crisis to this loss. Conversely, Trizio argues that the crisis of the sciences is primarily the result of the crisis of scientificity within the sciences. This means the sciences had lost philosophy's *ultimate foundation*, as they no longer provided the metaphysical grounding it once offered. The assessment is that the crisis of scientificity affects both the sciences and philosophy, without realizing their genuine scientificity.[2]

Although the skeptical interpretation provides valuable insights on scientificity, how does it address the concept of meaningfulness for life? Trizio makes a strong case that the core reason for the crisis is the loss of second-sense scientificity, appropriately questioning the rightful interpretation of the word *'meaning'*. However, I argue that his *dramatis persona* argument, in a sense, downplays Husserl's genuine concern for meaningfulness for life. Moreover, this concern extends beyond §2, as Husserl states in *Hua XXVII* that it is the philosopher's responsibility: "...der Zukunft der Menschheit, dem Werden wahren Menschen-tums, wofür wir uns doch selbst verantwortlich fühlen..." (Hua XXVII, p. 12).

Furthermore, in §2 itself, Husserl argues, "...questions of the meaning or meaninglessness of the whole of this human existence..." (Husserl, 1970, p. 6), and "But can the world, and human existence in it, truthfully have a meaning if the sciences recognize as true only what is objectively established..." (Husserl, 1970, p. 6). These statements indicate that Husserl aims to address the existential implication of the crisis, rather than merely describing a widespread perception held by others. While Trizio's focus on scientificity is valuable, his *dramatis persona* argument risks reducing Husserl's concerns to a mere rhetorical device, thereby

2. As a citation for this, Trizio brings up the following passage; „So wird nun eigentlich das Problem des echten Ideals einer universalen Philosophie und ihrer echten Methode..." (Hua VI, p. 10). Trizio attributes "echt" as authentic, whereas Heffernan is opposed to this translation. Heffernan states that "…scientificity in both senses is supposed to be genuine (...) one must not be misled by a distinction between (…) ''genuine scientificity'' and (…) ''authentic scientificity'', because the latter concept does not play a role in his definition of scientificity." (Heffernan, 2017, p. 252)

overlooking their direct causal link to the crisis of humanity.

According to Trizio, Husserl’s primary concern was the scientificity of sciences.

> Husserl explicitly claims that the “meaning of science for life” does not equate to its scientificity (...) the crisis of a science can only be a crisis of its scientificity (...) loss of that “meaning” cannot possibly coincide with the crisis we are trying to define. (...) Husserl, after all, is claiming that our science does not tell us anything about what really matters to us, what is vitally important for us. (Trizio, 2016, p. 197)

The skeptical interpretation is able to dislodge the concern for humanity, which importantly, according to the traditional interpretation, is the effect of the crisis. The sciences, by their very nature, are incapable of telling us anything about the human spirit. It is philosophy itself that has been in crisis ever since it lost its grip as the unifying force behind all sciences. As discussed in Chapter Two, the sciences have become specialized and successful without requiring for philosophical validation, whereas “...the “unscientific” character of philosophy is unmistakable...” (Husserl, 1970, p. 4) and thus unable to provide grounding for the sciences.

1.4 Inclusive reading

Both the traditional and skeptical approaches typically interpret the crisis by focusing on the crisis of the sciences. However, Heffernan presents an alternative view: the crisis of humanity is the root cause of the crisis of the sciences. In other words, the crisis of the sciences is not the source of the loss of meaningfulness for humanity but a product of it.

> ...Husserl’s Krisis of the European sciences should be identified both as a Krisis of their scientificity and as a Krisis of their meaningfulness for life. It also posits that only this approach does justice to the many different senses of Krisis in Husserl’s Krisis-texts as well as to the dual character of the Krisis of the European sciences in The Crisis. (Heffernan, 2017, p. 232)

As previously mentioned, both the inclusive and skeptical readings accept that the first-sense scientificity is unquestionable, as it consists of the methodologies employed and the process of obtaining scientific results. However, second-sense scientificity regards how these results foster meaningfulness for life. By taking the entirety of Husserl’s entire oeuvre into account, Heffernan is able to show Husserl’s humanistic tendencies.

> He retained his focus on what he called "the meaning of [his] life, [...] [his] mission". Between the wars, despite intermittent intimations of "hopelessness", he remained convinced that "the dream" of "philosophy as rigorous science" could be realized. He wanted not only to prevent the "extinction of philosophy" but also to show that it could lead Europe out of its "crises". (Heffernan, 2017, p. 234)

The *Vienna Lectures* support Heffernan's humanistic claims that the crisis originates from something beyond the crisis of the sciences—it is humanity itself that is in crisis:

> How does it happen that no scientific medicine has ever developed in this sphere, a medicine for nations and supranational communities? The European nations are sick; Europe itself, it is said, is in crisis. (Husserl, 1970, p. 270)

To put this humanistic crisis into a different context, the crisis of scientificity of the sciences does not exclude but encompasses the loss of their meaningfulness for life. If this is the case, what does it mean for the role of philosophy? Husserl's answer is twofold. On the one hand, if philosophy is dominated by skepticism and irrationalism, belief in the possibility of metaphysics and universal philosophy is undermined, ultimately leading to a "...collapse of the belief in reason..." (Husserl, 1970, p. 12). On the other hand, if philosophy takes up its critical task, explained in his *Teleologische Weltbetrachtung* (Hua XLII), by ascertaining the meaning of the world, it will be able to provide the universal grounding of all sciences on the plane of rationality. Regardless of the status of the sciences, the task of philosophy is clear: to restore meaning where it was lost due to irrationality.

> Die universale reine Wissenschaft tritt in Gegensatz zu der Universalität des Schicksals, des unendlichen und unberechenbaren Faktums, das als Schicksal die Rationalität aller menschlichen Praxis zerstört. Die Welt muss einen „Sinn" haben (...) die Philosophie muss den Sinn konstruieren in Bezug auf die Irrationalität des Faktums. (Hua XLII, p. 237)

Although I agree with the inclusive interpretation that the philosopher's profession should take up this responsibility, I argue that the reason for this struggle differs. For Heffernan, this struggle arises from humanistic concerns, whereas I align with the traditional interpretation, which holds that it stems from the need to provide a foundation for the sciences through a rigorous and radical philosophy.

Philosophers should be aware of their obligation to humanity and provide a foundational basis. Additionally, I argue that the sciences are non-receptive to philosophy's offer of providing a foundation, which has led to philosophy's disassociation from the scientific domain. This is why Husserl emphasizes rigor and methodological thinking, as philosophy is no longer considered part of that domain.

1.5 Unifying views: The Crisis in Context

I have tried to provide a comprehensive understanding of the current status of the debate. This includes the role of scientificity, the possible existential reasoning behind the crisis, and the causal roles each approach argues for. Additionally, it highlights that the debate over the interpretation of Husserl's *Crisis* remains unsettled, with a central issue being the correlation between the crisis of the sciences and humanity. This contrasts with the previously discussed skeptical reading.

As will become clear in the next chapter, I ascribe the Crisis to be a dual crisis—a crisis of the sciences causing the crisis of humanity—emphasizing the role of philosophy in mitigating both. Husserl argues that '*unser existenzielles Sein als Philosophen'* (Hua VI, p. 16) is under attack because philosophers are no longer the functionaries of humanity. This has led them to abandon the role in providing a foundation for the sciences, mirroring Heffernan's view that the crisis of the sciences reflects a deeper crisis within humanity. Philosophy has failed to be a beacon for the sciences, resulting in a situation where "...science has nothing to say to us..." (Husserl, 1970, p. 5).

I agree with Heffernan that Part One of the *Crisis* specifically demonstrates a profound willingness to engage the reader beyond mere verbal bluster, reinforcing the credibility of attributing a genuine concern for humanity's to Husserl's philosophy. David Carr supports this view, stating:

> Even the sciences of man insist that the scientist take no valuative position in his inquiry. Hence a hostile attitude toward science among the "younger generation": (...) "a crisis of science (...) consists in "the loss of its meaning for life." (Carr, 1974b, p. 45)

All approaches attribute the lack of grounding as a major contributor to the crisis. However, the reasons behind this failure differ. According to Carr, Husserl attributed the 'technization'

of the sciences as a way to silo themselves from one another, ergo creating an inability to provide meaning for life.

While both the traditional and inclusive approach are pointing in the right direction, they overlook an essential component—namely, the ‘role’ of philosophy. There is a causative relation between the crisis of the sciences and the loss of meaningfulness for life, but I argue that philosophy, by failing to fulfill its purpose, is the true catalyst for the crisis. This is an issue I will address in the next chapter.

CHAPTER 2 ROLE OF PHILOSOPHY

This chapter builds on the insights from Chapter One, which provided a framework for interpreting the crisis, and uses the conclusions drawn from these interpretations to deepen our understanding of the crisis by exploring the role of philosophy in addressing the crisis and its implications for the meaningfulness for life. Drawing on Husserl’s own arguments, I will demonstrate how philosophy serves as a grounding force, reconnecting scientific inquiry with its life-world origins and addressing the existential dimensions of the crisis.

The discussion will rely on proponents of the traditional reading, as it ascribes a causative relationship between the crisis of the sciences and the crisis of humanity, while also acknowledging the humanistic element provided by the inclusive approach. The importance of this causal relation is profound, as the role of philosophy rises or falls with its philosophical understanding of its task in serving humanity by providing grounding for the sciences.

Building on this causative argument, the trends that led to the failure of philosophy in providing a universal grounding for the sciences are further examined, leading to a better appreciation of the role of philosophy. This includes exploring the historical separation between philosophy and science, starting with Galileo's mathematization of nature, which initiated the trend towards specialization and technization. This detachment led to the loss of grounding for the sciences, resulting in a consequent loss of meaningfulness for human life.

2.1 The ‘siloization’ of the sciences

In this section, I have aimed to diagnose the crisis through the framework of philosophy’s role,

particularly the 'siloization' of the sciences, or so I argue. The sciences, through their focus on objective facts and technical prowess, have distanced themselves from the life-world, leaving humanity's meaning and significance largely unexplored.

When entertaining the task of philosophy, it would be remiss not to include *§*7, '*The project of the investigations of this work'*, as it perfectly embodies of Husserl's existential, or even humanistic, argument concerning philosophy's role.

> ...human philosophizing and its results in the whole of man's existence mean anything but merely private or otherwise limited cultural goals. (...) [that] *we are functionaries of mankind.* The quite personal responsibility of our own true being as philosophers, our inner personal vocation, bears within itself at the same time the responsibility for the true being of mankind; (...) Is there, in this existential "if," a way out? (Husserl, 1970, 17)

The power of the word *'private'* cannot be understated in this context. Both David Carr and Aron Gurwitsch credit this as a crucial part of Husserl's argument. According to Carr, the problem here is twofold. Not only is the philosopher no longer the functionary of mankind, but there is also mention of the community failing philosophy (Carr, 1974b, p. 51). As Carr states: "Taking seriously the role of a functionary of mankind (...) Husserl may be determined to do all he can to help make himself understood" (Carr, 1974b, p. 51). Aron Gurwitsch concurs with this assessment and specifies the meaning *'*private*'* by emphasizing its historical embeddedness. Consequently, this historical aspect—our inner historicity—places restrictions on how philosophy could contribute to abating the crisis.

As Gurwitsch states, "We, the philosophers of the present age, are by no means free arbitrarily to choose our directions, our problems, our points of departure (...) the past is implied within our present" (Gurwitsch, 1956, p. 385). Gurwitsch calls this the *cultural heritage*, and it is upon a *responsible* philosopher and his *responsible* community to be mindful of it. Although Heffernan concedes that Husserl himself is unclear about the specifics of how to realize it, he argues that Husserl is adamant in his critique. Specifically, Husserl points to the need to acknowledge the meaninglessness left by the sciences. This demonstrates that, for Husserl, philosophy is not merely an isolated intellectual pursuit but a historically embedded and community-oriented endeavor.

Philosophers, by recognizing their responsibility as 'functionaries of mankind,' must keep the

human condition in focus. However, this responsibility becomes increasingly challenging in a world where science has detached itself from the life-world.

Husserl conveys the urgency of this situation, stating: "...we are in a deplorable situation: We are searching in vain for the science that is supposed to serve us" (Husserl, 1981, p. 327). He continues, "...we lack the science which, with respect to the idea of man..." (Husserl, 1981, p. 328). Husserl argues that humanities have moved towards the "merely" empirical, where "[t]he enormous abundance of facts (...) is not held together by any bond of rationality concerning principles" (Husserl, 1981, p. 328). This is precisely the result of the 'siloization' of science, which in turn has led to the previously mentioned loss of scientificity. This shift indeed underscores the direness of the situation, prompting Husserl to call it a crisis.

To understand this detachment and illustrate the situation envisioned by Husserl, we must examine how technization and specialization contribute to the crisis. As scientists devote themselves to technical issues and methodologies—a process Husserl refers to as "technization" (Husserl, 1970, p. 47)—their focus narrows to advancing scientific society, often at the expense of broader philosophical considerations.

The technization of sciences, driven by Galileo's mathematization, reflects the transformation of sciences into arts reliant on unexamined foundations. This shift has led to a disconnection from philosophical foundations, leading to an overall loss of faith in reason. In *A Transcendentalist Manifesto: Introduction to 'Phenomenology and Anthropology'* Husserl emphasizes that "...transcendental or constitutive phenomenology presents as the true methodological foundation of philosophy..." tasked with "...radically interrogating the meaning and legitimacy of science as genuine knowledge" (Husserl, 1981, p. 313). Philosophy, according to Husserl, is not merely a secondary activity but the key to uncovering the ultimate grounds of knowledge. By distancing itself from the positive sciences, philosophy alone can address the foundational questions.

Ströker builds on this critique, emphasizing that the true issue lies in the meaning of life within science itself, which has been dominated by the objective and detached nature found in modern science (Ströker, 1988, p. 207). In a narrow historical sense, the crisis revolves around the turn to objectivism and the turning away from humanity—a shift that began in the second half of the nineteenth century (Husserl, 1970, p. 6). Since all scientific endeavors must adhere to these objective rules, they have created the previously mentioned distance between them, leading to

the siloization of science.

This emphasis on technical precision and an overabundance of facts often results in a desensitization to everyday life concerns. Specialization further entrenches the sciences within silos, desensitizing them and leaving little room for the broader questions of meaning and purpose. To illustrate this, I present the *City of Science*—a towering metropolis built upon its own scaffold, rising above the river of the life-world, which existed prior to science. Driven by technization and specialization, this city grows ever higher—constructing more silos—dimming and diverting our view from the meaningfulness inherent in the life-world. Within these silos, these different scientific disciplines operate in isolation, advancing technical knowledge while losing sight of the broader questions and overlooking the value of everyday experience. While the concept of the life-world is essential to understanding Husserl's perspective, a detailed explanation is beyond the scope of this discussion.

As we come to understand the world solely through factuality, the main task of the sciences becomes the pursuit of "...[s]cientific, objective truth is exclusively a matter of establishing what the world (...) is in fact" (Husserl, 1970, p. 7). Ironically, although the City of Science expands, it is an isolationist metropolis. Each discipline resides in its own part of town, sporadically venturing into others. Husserl's assessment is therefore apt:

> ...the total world-view of modern man (...) be determined by the positive sciences and be blinded by the "prosperity" they [the sciences] produced (...) Merely fact-minded sciences make merely fact-minded people. (Husserl, 1970, p. 6)

The impact of this lack of meaningfulness for life extends far beyond the scientific discourse. Gurwitsch concludes that this issue has coaxed our daily conversations as well, stating that it includes "...those of us who are *not professional scientists* or are even *ignorant* of the details of scientific theories, in reference to and in the light of its possible mathematical idealization" (Gurwitsch, 1970, p. 48). In other words, the crisis is exacerbated by modern science's reliance on ideal constructions. The process of technization further reinforces dependence on technique and specialization. Additionally, the overreliance of corporate funding [3] has further

3. In the last 30 years, S&E doctorate holders made an employment shift from the academic to the for-profit business sector. In 1993, nearly half of S&E doctorate holders (45%) were employed by universities and 4-year colleges, whereas 31% were employed by private, for-profit businesses (NSF 1996: Table 20). By 2021, these percentages shifted, with 39% in 4-year educational institutions and 37%

exacerbated the siloization of science, leading to its compartmentalization and the isolation of disciplines from one another. These desolate silos are increasingly consumed by specialization, incentivized by 'corporatization' and a lack of meaningfulness for life.

The mathematization of nature divided scientific investigation from meaningfulness for life, relegating it to a 'subjective' issue. This indicates that the sciences have rejected the 'life-world'. However, according to Husserl, science cannot escape the life-world. The life-world is naturally inclined to push us towards scientific truths, as those truths are nothing more than specializations of the everyday truths we come across in our daily lives.

To summarize, the sciences have disconnected from their philosophical foundations, by trading the 'subjective' for the 'objective,' thereby constructing a scaffold on the river of the life-world. Initially grounded in the life-world, the sciences have erected the City of Science—an independent framework that functions independently of its philosophical origins. This scaffold enables scientific specialization but obscures its reliance on foundational philosophical grounding. Over time, it has become self-referential, transforming into a perceived reality of its own, further alienating sciences from the life-world and reinforcing compartmentalized methodologies that have culminated in a crisis of lost meaningfulness for life.

2.2 Scientificity Revisited

In Chapter 1, I introduced the crisis of the sciences, primarily in terms of a disconnect between the sciences and meaningfulness for life. Building on this foundation, this section revisits the concept of scientificity itself. Now that we outlined Husserl's vision of the situation, we can identify the root cause of the crisis: a lack of genuine science, which had its impetus in the mathematization of nature. By regaining their grounding, the sciences can understand their foundations—namely, the life-world, which, as our prescientific subjective lived experience, is from the outset concerned with meaningfulness for life. This shift requires the sciences to reorient their priorities and realign themselves with this foundation.

Although the sciences are successful in the first sense of their scientificity, they remain—as

in for-profit businesses (NCSES SDR 2021: Table 42). As a proportion of all academically employed S&E doctorate holders, however, the number employed as full-time faculty declined since at least 2003 to about 70% in 2021.

demonstrated in Chapter One—reliant on philosophy to provide second-sense scientificity. This reliance, however, has been neglected, resulting in a disconnect from its philosophical roots.

Husserl further articulates this reliance by emphasizing that "...[t]here are pure sciences of essential being such as pure logic, pure mathematics, pure time-theory, space theory, theory of movement, etc. These, in all their thought-constructions, are free throughout from any positing of actual fact..." (Husserl, 2012, p. 18). Philosophy, then, offers the only framework through which sciences can reconnect with the life-world and regain their existential significance. Science, however, has turned into an art form—focused on the craft and execution rather than a foundational understanding of its principles. As a result, science has come to stress "...its own professional methods (...) of discovering and securing truths with a certain new ideal sense" (Husserl, 1970, p. 111).

The source of this shift lies in Galilean geometry, which established the benchmark for further scientific enterprises. According to Carr, Husserl states that this disconnect (Carr, 1974a, p. 140) resulted from the broader issues within modern philosophy and should be attributed to Galileo's mathematization of nature, which led to a rift between the sciences and philosophy. Since the sciences control their own methodology, they retain the first-sense of scientificity while losing the second sense, as philosophy is no longer present to provide it. This does not diminish the fact that Husserl is enamored by science's methodological focus and rigor. As he argues in *Philosophy as Rigorous Science*, "...there is only one remedy for these and all similar evils: a scientific critique (...) based on sure foundations, and progressing according to the most rigorous methods—the philosophical science for which we speak here..." (Husserl, 1965, p. 142). In other words, philosophy must harness the rigor found in the sciences, to perform its task systematically and with clarity.

This mathematization of nature was transformative for both scientific and philosophical endeavors. Galileo's system aimed to overcome the subjective, everyday description of the world by creating a universal geometrical system backed by mathematical laws that introduced exactness missing from everyday descriptions of the world. As a result, methodology gained a monopoly on truth. As Carr states "[i]n the hands of philosophers, Galileo's proposal is transformed into an ontological claim: to be is to be measurable in ideal terms as a geometrical configuration" (Carr, 1974a, p. 140). Gurwitsch identifies the roots of these issues in Galilean mathematics, which he traces back to its origin in Euclidean geometry. Over time, habitual use

obscured its foundations, leading to a loss of awareness regarding its scientificity, resulting in a self-referential character of geometry itself. Husserl’s critique demonstrates how the mathematization initiated by Galileo transformed the understanding of scientificity, prioritizing exactness and methodology over foundational truths.

This led to science losing touch with the life-world and philosophy, which became the necessary path to ‘regrounding’ this connection. As Husserl notes, “[f]rom facts follow always nothing but facts. If, however, all eidetic science is intrinsically independent of all science of fact, the opposite obtains, on the other hand, in respect of the science of fact itself” (Husserl, 2012, p. 19). This statement highlights the fundamental dependence of the sciences on the framework provided by philosophy, positioning transcendental phenomenology as the only means to address this disconnection.

Regardless of this, the sciences have abandoned this framework and now operate independently. The sciences, by prioritizing specialization and exactness, are overextended. Gurwitsch critiques this overextension by stating that “...even philosophical reflections on science, its meaning and bearing (...) start from, and abide by, the idealized and mathematized nature” (Gurwitsch, 1956, p. 393). He argues that even philosophical reflections into science remain constrained by the idealized and mathematized framework of nature, failing to question its foundational assumptions. This trend uncritically conceals the origins of scientific ideals, making it difficult to ascertain how idealized constructs connect to their foundations. Gurwitsch aptly highlights that this disconnect allows the idealized nature of science to persist unquestioned, further deepening the separation between the sciences and their roots.

2.3 Philosophy Understanding Its Role

This section explores the role philosophy should play in addressing the Crisis, drawing from Husserl's work. First, it discusses the importance of awareness for aspiring philosophers and the need for acknowledging one's heritage. Then, it analyzes philosophy’s contribution to remedying the Crisis by examining the dominance of the sciences and proposing a more unified philosophical approach.

2.3.1 Philosophy Understanding Its Role: Awareness

Having established the origins of the Crisis, we now turn to a summation of the role philosophy

should play in addressing it. This begins by considering what an aspiring philosopher should be aware of. According to Carr's assessment of Husserl:

> For most, taking up philosophy does not mean simply learning the "truths" that others have written (...) but the potential philosopher is (...) [driven] by his very dissatisfaction with traditional doctrines. (...) this task may even involve the conscious, total rejection of the entire philosophical tradition. But even such a philosopher, Husserl is saying, is an "heir of the past" (...) Yet his awareness (...) rarely penetrates to this level; his acknowledged relation to the past consists in his rejection (...) It is clearly the notion of unacknowledged heritage which interests Husserl at this point and which constitutes the peculiar historicity of the philosophically engaged consciousness. (Carr, 1974a, 136)

Acknowledging and understanding one's heritage as a philosopher is key to creating 'Selbstverständlichkeit'. Only when the philosopher takes his preconceived notions head-on, can he become unburdened by our historical prejudices. Carr terms this '*historical reduction'*.

By acknowledging their own bias, the philosopher is, according to Husserl, able to fulfill their main task, which is to (1) be aware of one's prejudice, (2) liberate oneself from it, (3) gain insight, and (4) make philosophical judgments accordingly. This is not a straightforward process, as he states: "All judgments which count as philosophical are related back to this task, this idea" (Husserl, 1970, p. 72).

Philosophy is tasked with laying bare the unified thread holding philosophers and philosophies together: their historicity. As we gain awareness of the historical backdrop behind their statements, we may even come to understand the philosophers better than they understood themselves. Heffernan cautions us that "better" means "different" due to our own historical endowment (Heffernan, 2013, p. 217). Husserl urges philosophers to be always aware of their historical faculties, as this awareness goes hand in hand with understanding their prejudices. This insight fosters sounder judgements, opening new perspectives on meaning. In this way, the philosophical task extends beyond personal insight, contributing to a renewed understanding of human experience.

2.3.2 Philosophy Understanding Its Role: Philosophy's Contribution

Now that we have laid the groundwork and understand the importance of historical reduction,

how can philosophy contribute to a remedy for the Crisis? To begin, we must first examine what is holding philosophy back from attaining its role and why.

In Part One Husserl adamantly praises the successes of the sciences, stating that "...their enduringly compelling successes are unquestionable." (Husserl, 1970, p. 4). These successes elevated the sciences' position in the discourse, which was exacerbated by the wavering trust in the ideal of philosophy as a foundational element. This shift led to "...outsiders as well as scientists, who, in the specialized business of the positive sciences, were fast becoming unphilosophical experts" (Husserl, 1970, p. 11). Meanwhile, "[u]niversal philosophy (...) took the form of system-philosophies, which were impressive but unfortunately were not unified, indeed were mutually exclusive (Husserl, 1970, p. 10). Husserl captures the essence of this challenge in *Philosophy as a Rigorous Science*: "Philosophy loses itself in the sciences and has its tasks prescribed by them; it is divided into as many philosophies as there are sciences, and these have become an incoherent manifold, unrelated and incapable of being unified" (Husserl, 1965, p. 125). Such fragmentation not only damages philosophy's coherence but also its ability to provide a unifying foundation for the sciences.

To summarize, the challenge is twofold. First, such effective system-philosophies reveal the clear lack of unity within philosophy. How can philosophy serve as the foundational element for the sciences if it itself is unable to be unified? Second, those holding positions in these sciences are de facto specialists in their respective fields; alas, philosophical ruminations are of no consequence to their effectiveness. Such conditions lead Husserl to claim that "...all modern sciences drifted into a peculiar, increasingly puzzling crisis with regard to the meaning of their original founding as branches of philosophy" (Husserl, 1970, p.12). Husserl begins by stating that the sciences are in crisis because philosophy has failed in its task of clarifying their ultimate unity and significance (Carr, 1974a, 127).

Let us first address the latter element, before focusing on the splintering of philosophy. Given that Husserl witnessed the different trajectories that both science and philosophy took, it is not unfathomable that philosophy began to use the tools (or methods) provided by science, which meant that "[a]ll subsequent problems connected with the world—its scope, its beginning and end, man's place in it and, above all, his knowledge of it—henceforth operate with this conception of reality as a presupposition" (Carr, 1974a, p. 141).

This redirection, along with the aforementioned lack of a unified philosophy, obscured the

view of the world. In light of this Carr mentions that "the scientific conception" (Carr, 1974a, p. 140) is merely "*an* interpretation of the world" (Carr, 1974a, p. 141), nothing more, nothing less. Such a lesson is forgotten and remains a major contributor to the crisis. Regardless, the following question still stands, "How, then, can "the sciences, as cultural facts in this world, with their scientists and theories," be part of the life-world?"(Carr, 1974c, p. 191).

Despite their technical and objective framing, science eventually produces nothing more than cultural accomplishments. These accomplishments stem from something universal that is prior to all other human praxis, and prior to the very denomination of something as scientific. But to understand this, we need to break our immersion and science's hold on our discourse, to reduce science to its place in our existence, as it is a human and therefore cultural activity. Only then:

> ...we become aware that we scientists are, after all, human beings and as such belong among the components of the life-world which always exists for us, ever pregiven; and thus all of science is pulled, along with us, into the—merely 'subjective—relative'—life-world. (Husserl, 1970, p. 130)

Due to the lack of scientificity concerning the life-world concept and the philosophical community's incoherence, science has positioned itself as the foundational element for understanding the world. Our culture is coaxed by science, which is counterintuitive because science itself is a cultural expression, a product of our culture. As Husserl argued in the preface to the English edition of *Ideas 1*, philosophy's "…sole task and service is to clarify the meaning of this world (...) [t]hat it exists" (Husserl, 1981, p. 48), a task attainable only through phenomenology. Further emphasizing this point, Husserl, in his 1917 inaugural lecture at Freiburg, declared phenomenology to be:

> …a science of a thoroughly new type and endless scope. It is inferior in methodological rigor to none of the modern sciences. All philosophical disciplines are rooted in pure phenomenology, through whose development, and through it alone, they obtain their proper force. Philosophy is possible as a rigorous science at all only through pure phenomenology." (Husserl, 1981, p. 10)

This shows that phenomenology, as the foundation for all philosophical disciplines, holds the key to addressing the disconnect between science and the life-world, redirecting philosophy, according to Husserl, back to its rightful place as the ultimate grounding for science by being

rigorous and methodological. As Carr states, modern science, according to Husserl, "...is part of the world, even if we are not scientists and have never actively engaged in it" (Carr, 1974c, p. 200). As scientists are engaged in the factual, the objective, they necessarily abstain from interacting with the life-world and solely stay on the plane of their own particular world, their scaffold. Just as a building relies on its scaffolding during construction, empirical sciences depend on philosophical frameworks to ensure coherence and meaning. This issue is further exacerbated by the fact that science and its theory have been pervasive throughout our modern era. We are captured by science, making it increasingly difficult to think beyond its context, thereby rendering the scaffold not merely a supporting structure, but a constructed reality itself.

What does this mean for the meaningfulness of life? The following quote from Husserl in the *Vienna Lectures* sheds light on this scaffold and its impact on humanity:

> All the works belonging to this scientific world, with their specific communal sense of being (actual and true being and, on the other hand, incorrect, false being for all persons of the community), do not merely make up a multiplicity belonging together according to their [mode of] being (...) rather, the particular works—the particular scientific results—become premises, building stones for works of a higher level, and this of necessity and in infinitum and, at the same time, in such a way that all the works of science [come together] in a coherent total work, the theoretical system (the theory contained in an ideal textbook). The scientific world, the scientists' horizon of being, has the character of a single work or edifice growing in infinitum, upon which the generations of scientists, belonging to it correlatively, are unendingly at work. (Husserl, 1970, p. 380)

This further emphasizes that scientific outcomes are all interconnected and codependent by resting on a foundation of prior scientific achievements. Such interdependence not only highlights the interconnectedness of scientific knowledge but also demonstrates that historicity is equally present in science. This scaffold reflects how science builds on the work of past generations, creating a robust foundation. Such an ongoing process shows how science expands over time and impacts its meaningfulness. Philosophers can find a remedy for the crisis only if they accurately assess the current scientific gaze, as this enables philosophy to redirect science back to the life-world and preserve its meaningfulness for life—a task that, according to Husserl, only phenomenology is equipped to accomplish.

CONCLUSION

Philosophy must provide the sciences with necessary grounding to retain scientificity and remedy the crisis. Yet philosophy itself is in disarray, which, as Husserl warns, "...in our time threatens to succumb to skepticism, irrationalism, and mysticism" (Husserl, 1970, p. 3). The absence of a single universal philosophical framework, replaced by competing philosophies, has led science to lose trust in philosophy as a grounding force. Restoring this trust is essential for philosophy to reclaim its role as a grounding element for the sciences.

The crisis does not stem from the first-sense of scientificity but from the second. The sciences remain confined within their own disciplines and frameworks, unable to grasp their origins and therefore unable to see beyond the fog to recognize that science is merely an artifact of the life-world. The critique of Husserl is on the sciences inward focus, creating "metaphysical fogs" (Husserl, 2019, p. 242). The sciences, due to their high scaffold, have lost sight of the life-world and therefore philosophy must illuminate the foundations of scientific evidence. Only through this grounding can philosophy restore the connection between science and meaningfulness for life, addressing the crisis of scientificity at its core.

The increasing demands for specialization started the process of siloization. This phenomenon is a double-edged sword, as Husserl praises science for its successes and advancements, yet these successes are due to methods that require an inward focus. The objectivism plane emphasizes factuality, specialization, and technization. However, this shift has dislodged philosophy and its role in ensuring meaningfulness for life.

Husserl acknowledges the prominence of the sciences, but as the evidence of the positive sciences "...however perfectly it may be formed..." (Husserl, 1981, p. 242) has become more susceptible, like philosophy itself, to "...skepticism and mysticism (...) [where both] can play their false games" (Husserl, 2019 p. 242), some apprehension regarding their direction and limitations. This raises a crucial question: What can philosophy do to bring the sciences back into the fold and address the lack of second-sense scientificity?

Husserl imagined philosophy as a universal discipline, one that could rigorously address the foundational questions. Echoing the traditional interpretation regarding the causality of the crisis, we can begin to tackle the crisis caused by the 'siloization' of the sciences by revisiting Husserl's vision of philosophy as both rigorous and universal, ultimately restoring the

grounding of both philosophy and science.

Philosophy, in the form of phenomenology, grounded on methodological standards and rigor, can reconnect science to the life-world and address its meaningfulness for life. When scientific systems lose their connection to the life-world and consequently their grounding in humanity, they risk becoming detached from it. By neglecting their role, philosophers have allowed this disconnection to deepen. Husserl advocated grounding science in radical reflection and rigorous methodology. Only if we are willing to understand and reaffirm the universal role of philosophy, which has been overlooked in our current discourse, can we begin to resolve the crises of science and humanity.

Philosophy, through phenomenology, should take on its self-responsibility and provide a universal grounding for the sciences.

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