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Phenomenology is explanatory: Science and metascience

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Abstract

This essay disambiguates the relationship between phenomenology and explanation, whereby we uncover a fundamentally new way to understand the function of phenomenology within the sciences. These objectives are accomplished in two stages. First, we propose an original way to interpret Husserl's claim that his phenomenology is non-explanatory. We demonstrate, contra accepted interpretations, that Husserl did not think phenomenology is non-explanatory, because it is descriptive or because it does not deal with causes. Instead, we demonstrate that Husserl concluded that phenomenology is non-explanatory, because it engages in a dialectical process of conceptual clarification. To substantiate this interpretation, we examine how Husserl understood the function of explanation in three different tiers of standard science and how he grasped the role of phenomenology in pure logic. Having properly clarified Husserl's conclusion—that phenomenology is non-explanatory—we then execute our second task, namely to challenge just that idea. We argue that Husserl has—despite his claims to the contrary—de facto and inadvertently described his phenomenology as an explanatory nomological science. Our paper therefore not only clears up a longstanding misinterpretation of Husserl, but opens a new area of debate concerning the status of phenomenology within the scientific nexus.

1 | INTRODUCTION

In the early parts of his career, Edmund Husserl explicitly claims that his philosophy is not explanatory. In an influential note to the 1901 first edition of the _Logical Investigations_, he urges us to "separate the purely descriptive examination of the knowledge experience," which phenomenology conducts "from the truly psychological researches directed to empirical explanation and origins" (Hua = Husserliana XIX, p. 23/Husserl 1970, p. 177).[1] It seems that, if one could be sure about anything concerning Husserl's conception of phenomenology in 1901 it is this: it is not explanatory, because it does not deal with material causes and is instead descriptive.

These ideas have rippled through contemporary phenomenological theory to the point of being accepted as canon. For example, they seem to be the source for Merleau-Ponty's well-known claims that phenomenology "is the attempt to provide a direct description of our experience such as it is, and without any consideration of its psychological genesis or of the causal explanations that the scientist, historian, or sociologist might offer of that experience" (Merleau-Ponty 1945, p. 7), and that phenomenology "involves describing, and not explaining" (Merleau-Ponty 1945, p. 8). In fact, introductory texts on phenomenology most often highlight the non-explanatory nature of this discipline very early on (see Smith, 2020). Phenomenological practitioners filter the description/causal explanation dichotomy into their praxis: for example, "Phenomenological psychopathology in itself is prior to any causal accounts of subpersonal mechanisms … We must accurately describe the phenomenon before we can arrive at a satisfying explanation" (Stanghellini et al., 2019). Husserl's claims have therefore been wide reaching.

The question whether or not phenomenology is explanatory is not an idle one. Perhaps the most pressing need for a consideration of the topic arises from the role that explanation has come to assume in discourse amongst philosophy of science. As Summa (2022) reminds us, it is often assumed that one of the scientific values of a theory lies primarily in its explanatory power. Explanatory power has come to be seen as the most important virtue a scientific theory can possess, and explanatory considerations are often the deciding ones when it comes to choosing between rival theories (e.g., Churchland, 1981). Theories of explanation play a pivotal role in contemporary philosophical considerations over the distinction between theory and observation, and debates over scientific realism (e.g., Maxwell, 1962). As our paper shows, for Husserl too the role of phenomenology and explanation is intimately bound to questions concerning the relationship between science and phenomenology.

This is of foremost importance to phenomenology as it impacts the vexed question of the naturalization of phenomenology that has been central to the discipline since the landmark works by Varela et al. (1999) and Gallagher and Zahavi (2008). The question of naturalization, in essence, amounts to precisely the question of the place of phenomenology amongst the other sciences, and the question of the relationship between phenomenology and explanation provides a piece to this puzzle. Explanatory integration is accordingly at least as much, if not more important than the previous battlegrounds over ontological and methodological continuity (see Reynolds, 2018). The importance of this topic is highlighted by the number of recent articles that argue that answering questions about the explanatory nature and value of phenomenology has the effect of situating it amongst the broader scientific nexus (Buccella & Springle, 2022; Casper & Haueis, 2022; Stendera, 2022; Summa, 2022; Williams, 2020, 2022b; Williams & Byrne, 2022; Williams & Musholt, 2022). As other recent papers (Fuchs, 2008, 2022; Marbach, 2022; Reynolds, 2022), recent book length work by Pokropski (2021), and the exchange over that book (Pokropski, 2022; Williams, 2022a) demonstrate, it is very likely that the next chapter in the ongoing dialogue of the naturalization of phenomenology will need to involve considerations of explanation.

This essay engages with the Husserlian origins of the dichotomy between explanation and phenomenology in two ways. First, we argue that this idea has been misunderstood. We show, contra accepted interpretations, that Husserl did not think phenomenology is non-explanatory, because it is descriptive or because it does not deal with causes. Instead, we demonstrate that, at least the early Husserl of the _Logical Investigations_, actually concludes that phenomenology is non-explanatory, because it engages in a dialectical process of conceptual clarification.[2] Sections two and three are dedicated to substantiating this interpretation. We engage—in section two—with Husserl's definition of _explanation_, which he commonly understands as scientific explanation. Specifically, we examine how Husserl

understands (scientific) explanation, as it operates in the three tiers of "standard science." In section three, we then uncover how Husserl understands the non-explanatory function of *phenomenology*, as it operates within the fourth tier of the sciences, namely, pure logic. In other words, sections two and three of this paper examine Husserl's understanding of the relationship between phenomenology and the explanatory function of science, where this ultimately reveals what Husserl means, when he claims that phenomenology is non-explanatory.

This paper not only comprises a historical analysis. After clarifying Husserl's claim, that phenomenology is not explanatory, we also directly and actively challenge it. The second more contentious claim of this essay is that, when properly understood, Husserl's argument—for his conclusion that phenomenology is non-explanatory—falls apart. We demonstrate that Husserl's phenomenology—despite all of his claims to the contrary—is de facto explanatory; Husserl inadvertently describes his phenomenology as performing an explanatory role within pure logic. To argue for this striking thesis, we show that phenomenology engages in the provision of laws and, for this reason, ought to be considered explanatory according to Husserl's own standards.

2 | EXPLANATION

2.1 | Three tiers of science

To lay the groundwork for clarifying what Husserl means when he claims that phenomenology is non-explanatory, in this section, we examine what Husserl means with the term "explanation." Specifically, we investigate his understanding of the different kinds of explanations operative in standard science, which Husserl identifies as having three tiers. He claims that there are the concrete sciences, the nomological sciences, and the a priori disciplines. Our discussion of Husserl's philosophy of explanation thus sequentially examines the explanations of or between each of these three tiers. In Sections 2.2 and 2.3, we discuss the explanatory relations that arise between concrete tier one and nomological tier two sciences. Then, in Section 2.4, we discuss the explanations of third tier a priori sciences. Through this whole investigation from Sections 2.2 to 2.4, we ultimately show that Husserl is operating, at the most basic level, with a deductive-nomological theory of explanation. Finally, in Section 2.5, we introduce the key concepts of "ground" and "unity" which, together with the concept of "deductive-nomological" comprise the essential features of Husserl's account of explanation across all fields of standard science. These concepts accordingly prove indispensable when attempting to grasp Husserl's understanding of the function of phenomenology.

By way of introduction, the different tiers of science are generally charted in the figure below.[3]
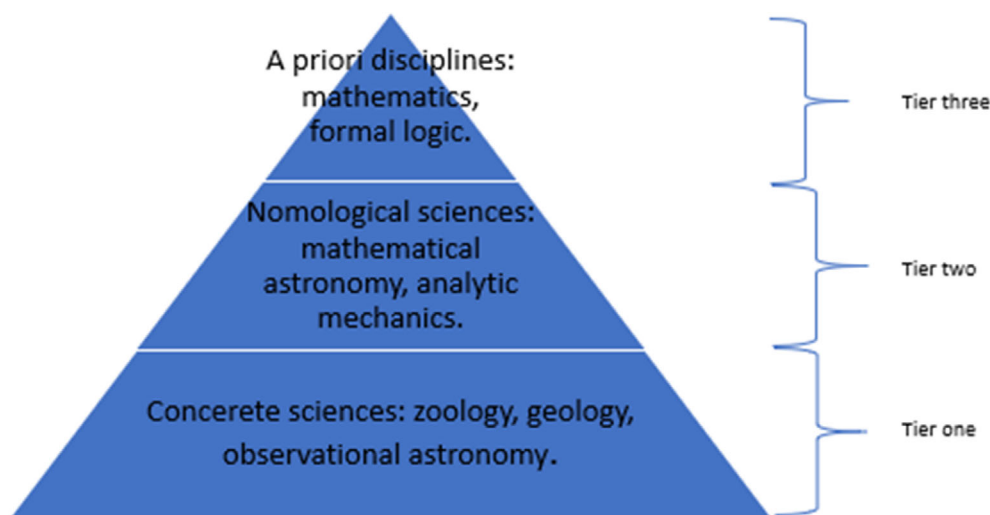
2.2 | Deductive-nomological explanation: First and second tier

Theorists today universally recognize that the provision of explanations is one of the most important things sciences do. Husserl agrees; a significant concept of Husserl's discussion of science in the _Prolegomena_ is "explanation." For the early Husserl, explanations are a form of deductive argument where two premises lead to a conclusion. He writes, "In the explanatory sciences, deducing… plays a leading role" (Hua XXX: 256/Husserl 2019, p. 272). For Husserl, "[E]xplanatory theory" means "_deductively explanatory_" (Hua XXX, p. 337/Husserl 2019, p. 355).

The deductive explanations in question arise as so. The goal of those sciences found on the first tier (the concrete sciences) is "the description of individual and typical individuations of earthly and heavenly existence" (Hua XXX: 338/Husserl 2019, p. 356). These descriptions alone do not explain. Husserl correctly recognizes that the expressed propositions of the concrete sciences require the expressed propositions of the nomological sciences in order to carry out the essential function of science, that is, to provide explanations. During the relevant kinds of explanation, the laws of the nomological sciences serve as one premise. One then assumes certain or "pertinent circumstances" as antecedent conditions that serve as the other premise. Husserl's thesis is thus that the contingent facts of the concrete sciences can be explained when they can be deduced as the consequence of a deductive argument, where these two subclasses of explanantia serve as premises (Hua XVIII, p. 234/Husserl 1970, p. 146). The nomological sciences of the second-tier articulate laws that subsume the facts about the things that are the subject matter of the concrete sciences of the first tier (Hua XXX, p. 337/Husserl 2019, p. 355). This allows us, in science, to aim "ultimately to bring the particular under the law-concepts of what are called the abstract sciences precisely for purposes of explanation" (Hua XXX, p. 338/Husserl 2019, p. 356).[4]

This is, of course, a standard account of "what scientific explanation amounts to" (Hardy, 2014, p. 17), according at least to the famous DN model as it was first articulated by Hempel and Oppenheim (1948). As the latter put it, all "explanans falls into two subclasses; one of these contains certain sentences … which state specific antecedent conditions", that is, Husserl's presupposed or pertinent circumstances, "the other is a set of sentences … which represent general laws" (Hempel & Oppenheim, 1948, p. 137), that is, the propositions of Husserl's nomological sciences.

Even though it is the abstract sciences that articulate the laws that feature in explanations, Husserl concludes that the concrete sciences carry out the type of pertinent explanations by "borrowing" those laws and applying them. Each concrete science "corresponds" with certain nomological disciplines that provide the requisite resources to explain the facts about its field. For example, biological sciences, such as zoology or botany can borrow the lawful resources from the corresponding nomological disciplines of biochemistry, cell theory, or genetics. The empirical or concrete sciences thus "set themselves the goal of not only describing concrete individuations of a field, let us say of some natural sphere, but of explaining them as necessarily being so through subsumption under the laws of a corresponding nomological discipline" (Hua XXX, p. 256/Husserl 2019, p. 255). Tier one concrete sciences "reach up" to a corresponding discipline above them in tier two and use the nomological resources they find there in order to explain the facts they have described.

2.3 | Interlawful explanation

Husserl not only states that there are explanatory relationships between the first and second tier sciences. Rather—as we discuss in this subsection—he also highlights that there are specifically _three_ different kinds of explanations to be found within these two tiers. Only by examining these three, can Husserl's theory of explanation begin to be properly clarified.

There is first, the just discussed explanation of "singular facts through general laws" (Hua XIX, p. 26/1970b, p. 178). Husserl, however, does not believe that singular facts are the only kind of facts that can be explained. Instead, he notes that there is a distinction between singular facts and general facts: "individual and general truths" (Hua XVIII, p. 233/Husserl 1970, p. 146). The second kind of explanation is of general truths. This occurs when "we

are referred to certain general laws which, by way of... deductive consequence yield the [general] proposition to be proven" (Hua XVIII, p. 233/1970, p. 146). Simply stated, laws explain two types of facts: individual ones ("this Starling was aggressive because ...") and general ones ("all Starlings tend to flock because ...").

Third, Husserl concludes that not only *facts* may be explained. Rather, he observes that certain *laws* can be explained by other *more general* laws; as he calls them, more "basic" or "fundamental" grounding laws ("*Grundgesetze*"). We can call this "inter-lawful" explanation. Husserl clearly endorses the notion of interlawful explanation, writing that the word "explanation,"

> has a twofold meaning if on one occasion one speaks of explanation with regard to what is concrete and its subsumption under the concepts of the abstract sciences, and on the other hand, says in the abstract sciences themselves within the context of the theory that through subsumption of the particular laws under the basic laws, the former receive their explanation.
>
> (Hua XXX, p. 339/Husserl 2019, p. 357)

Accordingly, *within* nomological science, there are the explanations of "general laws through some fundamental law" (Hua XIX, p. 26/1970b, p. 178). One might think of how "for example, *Kepler's Laws* receive their explanation from the basic law of universal gravitation and the basic laws of mechanics" (Husserl XXX, p. 311/2019, p. 357). In other words, it is not *only* the facts concerning the orbit of this or that planet on this or that occasion which Newton's theories explain. Rather, Newton's theories *also* explain the less fundamental Keplerian laws concerning the orbital behavior of *all* celestial bodies. We are thus, Husserl writes, "led upward in the hierarchical structure of the law-governed dependencies to the basic laws upon which all full, ultimate explanation is based" (Hua XXX, p. 244/Husserl 2019, p. 257).

## 2.4 | Explanation within a priori sciences

We move on now to an investigation of explanations within the third tier of standard science. The third-tier sciences are the a priori disciplines that—in *Ideas 1*—Husserl refers to as the "pure eidetic sciences," such as "pure mathematics, and the pure theories of time, space, motion, and so forth" (Hua III-1, p. 21/1982, p. 16). On the one hand, explanation within a priori science mirrors explanation within natural science in that they are both DN. On the other hand, natural and a priori explanations are distinct because the respective laws are of different natures.

In second tier nomological sciences, *natural laws* serve as the nomological premise. In contrast, within a priori sciences, *axioms* serve as the lawful premise (Hua XIX, pp. 27–28/Husserl 1970, p. 178). Axioms are fundamentally distinct from natural laws in two ways. First, they are "given" and established quite differently. Axiomatic laws are not established inductively, and it is impossible to think that they could be revised. Instead, they are grasped eidetically. Axioms are given immediately and self-evidently. They "must be able to come to givenness in directly evident insights, while the opposite holds for factual laws" (Hua XXX, p. 247/Husserl 2019, p. 261). Unlike the laws of the natural theoretical sciences, these axiomatic laws have "entire validity: they themselves in their absolute exactness are evident and proven ... established by *insight*" (Hua XVIII, p. 81/Husserl 1970, p. 53). As Smith elucidates, for example there are "those judgment-species whose truth is self-evident (or is taken as such), for example *red is a color*" (Smith, 2016, p. 279), or *all even numbers are divisible by two*.

Second, while the deductive process of explanation is potentially *regressive* within natural science, such that more primitive laws can often be requested to explain *an explanans*, axioms "are the primitives or starting points in the order of justification" (Smith, 2016, p. 279). It is a mistake to ask for further deductive explanation of an axiom. Explanation is not an *infinitely* regressive or recursive procedure for Husserl; he is in this sense a scientific foundationalist. For him, finding and referring to axioms is to hit explanatory bottom.

Husserl asserts in the *Prolegomena* that there is a strict separation between the sphere of the ideal and a priori, on the one hand, and the concrete and the empirical, on the other hand. The realm of the a priori is ideal, not *reale* or *reele* being. In line with this, the pure and ideal explanatory axioms "exclude all factual content" (Hua XVIII, p. 83/Husserl 1970, p. 52). Because pure axioms are non-factual, they are non-causal, as "real" causality is only to be found amongst the actual, that is, factual empirical world. Husserl inherits from Bolzano the insight that mathematical truths can be explanatory, even though they "exclude, therefore, causal content. Thus, mathematical truths can be related as ground and consequence, although they do not deal with objects that have reality" (Bolzano, 1972, p. 273). For example, while the axiom that all even numbers are divisible by two certainly explains why there is no even prime greater than two, the axiom does not *cause* there to be no prime greater than two. For Husserl, the reason an explanans explain the explanandum is not because the explanans causes the explanandum. Rather, this is because there is a relationship of deductive entailment whereby the consequence is grounded in (here, an axiomatic) law.[5] Thus, contrary to interpretations such as Merleau-Ponty's, identifying that phenomenology is not a causal science is not enough to rule it out from being explanatory. Husserl thought that some explanations are non-causal.

To summarize the results of this section; the explanatory relation can be found *four* times within the hierarchy of the three tiers of regular science. Each of the four explanatory relations is represented by an arrow below:
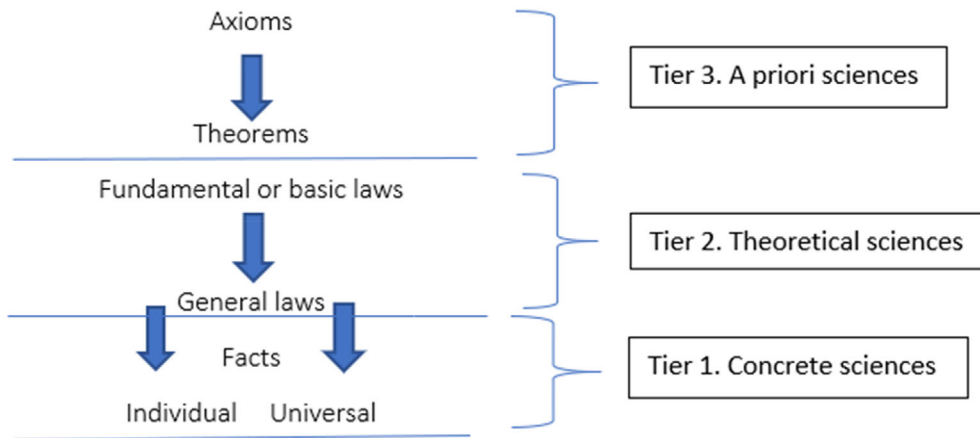
2.5 | Husserl is a unificationist

Before continuing to examine Husserl's analysis of the overarching function of phenomenology as non-explanatory, it is necessary to further clarify how we should understand his insights about the explanation inherent to standard science. Although the concept of "deductive nomological" provides an important starting point, it is crucial to see that for him the concepts of "grounding" and "unifying" need to be added in order to have the full picture.

Put otherwise, to say that every explanation must be a deductive argument is to provide only a necessary yet insufficient condition. This is because, in Husserl's own words, "every explanatory interconnection is a deductive one, but not every deductive interconnection is an explanatory one" (Hua XVIII, p. 235/Husserl 1970, p. 147, translation modified). Husserl's prescient insight is that the laws or axioms which feature in DN explanations must also perform the function of *unifying* science.

A central aim of Husserl's philosophy of science from the *Prolegomena* is to clarify how *many* propositions can be organized to form *one* unified science (Hua XVIII, pp. 230–238/Husserl 1970, pp. 144–149). Unity arises differently depending upon the tier in question. The concrete sciences are united by their concern with specific sets of phenomena, which are taken as belonging together. Zoology studies the objects that belong together as animals,

geography investigates states of affairs that concern the structure and substance of the physical earth, and meteorology examines the processes of the atmosphere, and so forth. (Hua XXX, p. 338/Husserl 2019, p. 356; Hua XVIII, p. 236/Husserl 1970, p. 148).

Thus, first-tier concrete sciences are united by their subject matters. In contrast, the second tier of the sciences—which Husserl refers to variously as the "nomological" or "explanatory" sciences (Hua XVIII, pp. 235–236/ Husserl 1970, pp. 147–148)—are sets of laws, which are organized according to their unificatory structure. Contemporary unificationist Phillip Kitcher describes this structure well when he states that

> Science advances our understanding of nature by showing us how to derive descriptions of many phenomena, using the same patterns of derivation again and again, and, in demonstrating this, it teaches us how to reduce the number of types of facts we have to accept as ultimate (or brute).
>
> (Kitcher, 1989, p. 432)

It is this reductive unificatory structure that provides explanatory force. Husserl agrees that the unificatory structure of science is what accounts for explanation and he refers to the propositions which do the unifying as *grounds*. As he says in *Logic and Theory of Science*,

> a deductive theory is no more than a web of proofs by means of which an essentially related *group of truths* leads back to *one and the same store of ground-truths* as the consistently perfect irreducible basis out of which they are all provable and by this means are (as people also say) explained.
>
> (Hua XXX: pp. 246–247/Husserl 2019: p. 260, emphasis ours, translation modified)

The global aim of natural scientific explanation is to "theoretically, i.e. deductively" subsume an *infinite* number of possible observations and "an *infinite* supply of laws back to a *finite* foundation of basic laws that united present the perfect basis for all other laws as necessary consequences" (Hua XXX, pp. 255–256/Husserl 2019, p. 271, our italics), and in doing so to *unify* science.

Similarly, regarding the a priori disciplines,

> we have a system unfolding itself in pure deduction into *infinity*, in which all further propositions follow purely analytically – and fully explicitly – from a *finite* number of independent basic propositions as a perfect, irreducible basis.
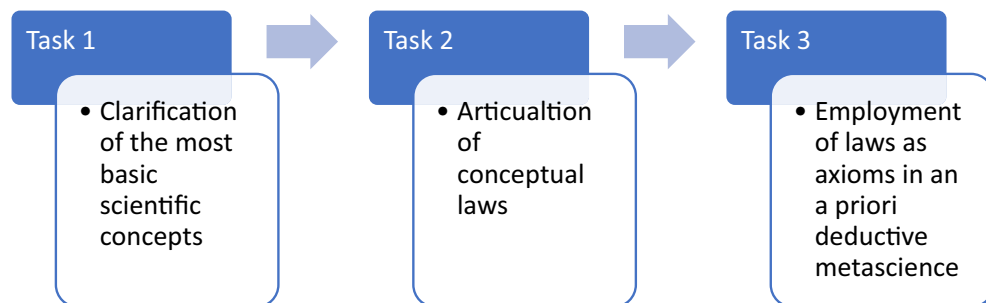>
> (Hua XXX, p. 261/Husserl 2019, p. 277, our emphasis)

3 | PHENOMENOLOGY

3.1 | Pure logic

Having outlined Husserl's understanding of the term "explanatory," we can now begin to present our new interpretation of why he concludes that phenomenology is non-explanatory. Husserl's identification of phenomenology as non-explanatory is catalyzed by his observation that phenomenology does not operate in isolation, but instead also has its function within the scientific field. Albeit phenomenology plays a role within an additional fourth tier of the sciences, namely, "pure logic." This fourth tier sits outside of standard science—it is discontinuous with the nexus of regular science including the level of a priori science—as it is instead a science of the sciences. Pure logic is a part of a *Wissenschaftslehre*.

In what follows, we explore Husserl's theory of pure logic and phenomenology as non-explanatory, by discussing the three different tasks of pure logic (the fourth tier of the sciences) in individual sub-sections. We diagram these tasks below:

Task 1		Task 2		Task 3
• Clarification of the most basic scientific concepts	→	• Articualtion of conceptual laws	→	• Employment of laws as axioms in an a priori deductive metascience

To more explicitly outline the structure of this section, first, in Section 3.2, we—as is necessary for the purposes of this paper—begin by examining the third and final task of pure logic. By doing so, we can simply clarify the technical details of Husserl's theory of the different aspects of pure logic. In Section 3.3, we then discuss Husserl's account of the first task of pure logic—the clarification of concepts—to show how phenomenology is operative within pure logic. Finally, we discuss the second task—the articulation of laws—to reveal why Husserl *believed* that phenomenology is not explanatory in Section 3.4. Section 3.5, in part, summarizes these results.

3.2 | The third, arithmetic task of pure logic: *Mathesis Universalis*

The *concluding* task of pure logic, which we examine first, is to produce a metascience which "deals *a priori* with the *essential sorts (forms) of theories and the relevant laws of relation*... investigating *possible theories* in *a priori* fashion" (Hua XVIII: p. 248/Husserl 1970, p. 155). The essential forms of theories and relevant laws are entirely formal such that they can be applied to and govern the formation of any interconnected meanings of any discipline.[6] Indeed, it is this "wide degree of *independence of form from a field of knowledge* that makes possible a *theory of science*" (Hua XVIII, p. 35/Husserl 1970, p. 22). Hartimo conjectures that with this *Mathesis Universalis*, "Husserl seems to be envisioning something like modern model theory" (Hartimo, 2003, p. 136).

Husserl claims that this metascience is possible, because theories are bodies of propositions, which can be formalized and represented as a series of patterns of entailment amongst contents. Both the relations amongst the contents and the differing forms that such a pattern could take could be deduced and displayed systematically. He says that "just as every proposition has its proposition-form, every inference its inference-form, so every proof has its proof-form, and finally the whole theoretical discipline its discipline-form" (Hua XXX, p. 257/Husserl 2019, p. 273). The third task of pure logic will display all the possible forms of disciplines. The task involves "a definite, ordered procedure which will enable us to construct the possible forms of theories, to survey their lawful connections, and to pass from one to another" (Hua XXX, p. 257/Husserl 2019, p. 273, trans modified). At this meta-level, we identify the formal features of science more easily and thus can separate it from pseudoscience.

Though covering all the general forms of grounded validations in any discipline, pure logic is an a priori discipline, and as such shares numerous features with other, more familiar a priori disciplines. As Husserl writes, pure logic has "the character of an *a priori*, purely demonstrative science" (Hua XVIII, pp. 23, 24/Husserl 1970, p. 14). Pure logic is an "*a priori, theoretical, nomological science*" (Hua XVII, p. 244/Husserl 1970, p. 152). The third task of pure logic, Husserl states, has the same methodology as other nomological a priori disciplines, such as mathematics. Husserl goes as far to call the "science of possible forms of theories and theoretical disciplines in general ... a new and highest kind of formal mathesis" (Hua XXX, p. 257/Husserl 2019, p. 273). Metascience is formal and proceeds purely *deductively*. It is made possible because "we can draw deductive conclusions – still remaining in the form" (Hua XXX,

p. 263/Husserl 2019, p. 283). Although not a type of a priori quantitative mathematics or logical syllogistics, the third task of pure logic is carried out in "a priori fashion" and the deductive style of procedure involved in constructing variations of forms of theories will have its "entire basis" in the style of other mathematical a priori disciplines (Hua XVIII, pp. 248, 249/Husserl 1970, pp. 155, 156).

In fact, Husserl goes so far as to state in the 1901 *Investigations* and the 1917/18 *Logic and General Theory of Science*, that the final task of pure logic is *a job for the mathematician and not for the philosopher*. He claims that these deductive procedures are most at home amongst the mathematical disciplines and that already formal syllogistic logic has received a more thorough treatment there than it was ever given by philosophers. Husserl states elsewhere that "Constructing deductive theories is definitely the business of mathematicians. They are, as it were, the solely competent engineers of deductive structures" (Hua XXX, p. 249/Husserl 2019, p. 262). Simply then, the "construction of theories, the strict, methodical solution of all formal problems, will always remain the home domain of the mathematician" (Hua XVIII, p. 253/1970, p. 158).[7]

This third task of pure logic, which is a theoretical science involving a deductive procedure much like formal mathematics, is governed by a set of axiomatic pure laws. These laws "regulate, *in a priori*, *deductive fashion*, all specialization of the Idea of Theory in its possible kinds … Things are here as they are in the wider field of deduction, e.g. in the case of simple syllogisms" (Hua XVIII, p. 244/Husserl 1970, p. 152, italics altered). That is, the pure laws here are much like the regulative laws of syllogistic logic which fill the textbooks of Medieval logic. Thus, just as Peter of Spain's theory of the syllogism states that it is an inviolable law that no "syllogism can be made of propositions that are entirely particular, indefinite, or singular" (Peter of Spain, 1988, circa 1230, p. 218), pure laws would let us know whether a particular theory form outlined during the third task of pure logic has a valid theoretical structure. Thus, Husserl says, "it is possible to construct, out of purely categorial concepts, many definite concepts of possible theories or pure 'forms' of theories, whose essential status *has been deduced from laws*" (Hua XVIII, p. 248/Husserl 1970, p. 155).

Interestingly, Husserl also states that the pure laws which govern the third task of pure logic "*impart unity to all theory as such*" (Hua XVIII, p. 244/Husserl 1970, p. 152). In other words, the *many* forms that theories can take are unified because they can be deductively traced back to a lawful base. The reason these remarks are so striking is that Husserl is stating that the third task of pure logic is a deductive, a priori theory which finds its departure point in unifying laws. There are, therefore by Husserl's own account, explanations arising from the third task of pure logic. Pure laws can be referred to in order to *explain* why a particular theory form qualifies as scientific, in the same way that natural laws and axioms can be referred to in order to explain the consequences which follow from them. Because the *Mathesis Universalis* is a deductive a priori discipline which begins from a sample of axiomatic laws, laws that serve to unify the consequences that follow from them, the *mathesis* is explanatory *according to Husserl's definition* of scientific explanation. To make this claim is not, of course, to say that phenomenology is explanatory, because it is the mathematician and not the philosopher who carries out the third task. We outline below the role of the philosopher in the *first* task of pure logic.

3.3 | The first, philosophical task of pure logic: Basic concepts and meaning-forms

The third task of pure logic—and indeed any deductive a priori discipline—must begin with the utilization of axioms from which deductions can begin. As is well known (see Williams & Byrne, 2022), no further *deductive* proof can be offered for any axiom, as they rest on no further premises. Instead of being proven or explained, an axiom can only be clarified. Specifically, it is the fundamental concepts which the axiom contains that need clarification. By attaining lucidity regarding the concepts, that is, by intuitively understanding those concepts, one can also have the corresponding intuition of the axiom. This task is critical, as Husserl thinks that the greatest threat to scientific knowledge is not the hindrance of its *progress*, but the inadequate capacity to understand what we *mean* when we use the most basic concepts of our theories.

Yet, the resources for conceptual clarification elude the deductive practitioner. The mathematized disciplines, *even the third and final task of pure logic*,

> cannot satisfy us theoretically. They are, as theories, not crystal-clear: the function of all their concepts and propositions is not fully intelligible, not all of their presuppositions have been exactly analyzed, they are not in their entirety raised above all theoretical doubt.
>
> (Husserl, 2001, p. 16)

Instead, Husserl concludes that conceptual clarification is a *philosophical* activity. The philosopher "*must, first* of all, lay down the more important concepts, in particular all the *primitive* concepts which 'make possible' the interconnected web of knowledge" (Hua XVIII, p. 244/Husserl 1970, p. 153)—theoretical "concepts of concepts" like "concept," "proposition," "truth," and objective general concepts like "object," "state of affairs," "unity," and so forth. In accomplishing this task, that is, in hitting upon conceptual clarification of the basic concepts involved in pure science, we systematically hit upon the *first* preparatory and foundational task that pure logic must undertake in the establishment of a truly stable and univocal system of knowledge.

With these conclusions, Husserl is beginning to circumscribe the task of the philosopher, which contributes to the development of pure logic. The philosopher must, in this first stage of pure logic, execute reflection "on the essence and meaning of the governing basic concepts and basic laws" (Hua XXX, p. 235/Husserl 2019, p. 248). A *non-deductive* method is needed for these preparatory tasks, because a concept cannot be clarified by deduction (if that were possible, we could leave this task to the mathematicians). Instead, clarification involves the processes of intuitive clarification aimed at disambiguation (Husserl, 1980, p. 86). This is the fairly standard philosophical practice that we see Husserl iteratively employing in the *Investigations*: take a term and lay out the possible meanings it assumes and engage in a critical evaluation of these different senses (see, e.g., his discussions of the term "consciousness" in the Fifth Investigation. Perhaps the most striking and ready-to-hand example is the discussion of the essence of "logic" itself in the *Prolegomena*).

It is from this position that we can understand the role of phenomenology. For Husserl, conceptual analysis and phenomenology are inextricably linked. In the *Prolegomena*, he states that conceptual clarification and critique involves an investigation into the "*phenomenological origin*" (Hua XVIII, p. 244/Husserl 1970, p. 153) of concepts. Furthermore, Husserl says in the introduction to the *Investigations* that phenomenology

> lays bare the 'sources' from which the basic concepts and ideal laws of pure logic 'flow', and back to which they must once more be traced, so as to give them all the 'clearness and distinctness' needed for an understanding, and for an epistemological critique, of pure logic.
>
> (Hua XIX, p. 6/Husserl 1970, p. 166)

Husserl holds that the origin of all concepts can be traced back to an intuitive consciousness, because "no concept can be thought without a foundation in a concrete intuition" (Hua XII, p. 79/Husserl 2003, p. 83). As Moran elucidates, Husserl's program "was to bring these concepts to 'clarity and distinctness' by grasping their evidential character, which … involved tracing them back to their 'ultimate sources', in the intuitions that underlie them" (Moran, 2007, p. 242). Critique and clarification of concepts can therefore be justified via recourse to experience. However, the "logical justification of a concept" is not necessarily found through an *empirical* experience, but "is achieved by going back to its intuitive or deducible essence" (Hua XVIII, p. 243/Husserl 1970, p. 152). The finished product is "*insight into the essence* of the concepts involved, looking methodologically to the fixation of unambiguous, sharply distinct verbal meanings" (Hua XVIII, p. 244/Husserl 1970, p. 154).

Two things should be reiterated here. First, the nonmathematical, philosophical task which contributes to pure logic is the clarification of foundational concepts. Second, one key aspect of this clarification of concepts involves a reference to the origin of those concepts in intuitive experience.

On the basis of these insights, we can begin to show why Husserl concluded that phenomenology is not explanatory. Certainly, when one lays out the different meanings that a concept might have via recourse to intuitions, one is not providing an explanation of those concepts at all (Hua XXX, pp. 337–339/Husserl 2019, p. 355–357). Instead, this method is one of dialectical clarification. Dialectical clarification, in particular, answers why Husserl thinks that the task of phenomenology is not the provision of explanations. He states that, "It lies in the distinctive nature of philosophical knowledge as opposed to all other knowledge that its goal is in no way, and can in no way be, to provide 'theories' in the usual sense of *explanatory theories*" (Husserl, 2019, p. 355). For Husserl, this means that there is no *deductive* argumentation involving the *unifying* relationship of consequence to grounds. Husserl states that, properly characterized, his epistemological investigation, which forms a part of the theory of knowledge, is not explanatory because it is, in a proper sense,

> no theory. It is not science in the pointed sense of an explanatorily unified theoretical whole … The theory of knowledge has nothing to explain in this theoretical sense, it neither constructs deductive theories nor falls under any… Its aim is not to explain knowledge … but to *shed light* on the *Idea* of knowledge.
>
> (Husserl, 2001, p. 178)

3.4 | The second task of pure logic: Concept clarification and laws

If it were the case that there were only a third task of pure logic, which fell to the mathematician, and a first task, which was the responsibility of the philosophical phenomenologist, then there would be a very clear distinction between explanation and phenomenology. The mathematician would develop explanations during the development of *Mathesis Universalis* and the phenomenologist would not explain, but rather clarify concepts.

However, there is also a second task of pure logic. According to Husserl, this second task is the articulation of "the *laws* grounded in… concepts," which were clarified in the first task (Hua XVIII, p. 247/Husserl 1970, p. 154). He thinks that once a concept has been clearly delimited via intuition during the *first* task of pure logic, then—during the second task—its necessary and sufficient conditions and its relationship to other concepts (e.g., which other concepts it subsumes) could subsequently be articulated in non-ambiguous lawful propositions. Simply stated, the goal of the second task of pure logic is to articulate the laws which regulate the concepts that were clarified by the phenomenologists or philosophers. In this subsection, we outline how Husserl understood this relationship between the first and second task of pure logic.

Although Husserl does not explicitly state who is to carry out this *second* task of articulating laws, we have good reason to think it ought to be the phenomenologist. Husserl himself also comes *very* close to saying as much, writing that "The task of philosophers lies in … the complementary reflection on the essence and meaning of the governing basic concepts [task one] *and basic laws* [task two]" (Hua XXX, p. 255/Husserl 2019, p. 271, our italics). It is often overlooked that a significant part of Husserl's phenomenological project is envisioned in terms of lawfulness and the formulation of laws. Husserl's conclusion—that phenomenology engages in the articulation of laws—is consistent throughout his career. In the lectures on *Theory of Knowledge* from 1906 he states that,

> *Phenomenology, or the science of consciousness* …, has the task of analyzing pure phenomena… of setting up the categories of their elements and of the forms of their relations *and the accompanying laws of essence*.
>
> (Hua XXIV, p. 219, 220/Husserl 2008, p. 216, italics altered)

Later in the same work, he adds that "scientific-phenomenological investigation is aimed at general essences and laws of essence" (Hua XXIV, p. 230/Husserl 2008, p. 226). In *Ideas I* of 1913 he writes, "To achieve scientific

cognition is [phenomenology's] goal, i.e., to theoretically stamp and control [experiential consciousness] so that it becomes a system of concepts and statements of laws which have their source in the pure intuition of essences" (Hua III-1, pp. 311, 312/Husserl 1982, pp. 323, 324). In *Ideas 2* he says, that "there are essential laws of consciousness, is indeed an absolutely indubitable truth" (Hua IV, p. 293/Husserl 1989, p. 306, 307). In the *Phenomenological Psychology* lectures of 1925, he states that "the pure essential theory of the mental ... is even a knowledge of the highest cognitive dignity, just like the mathematics of nature, insofar as it establishes everywhere in factual space the apodictically necessary structure of laws" (Hua IX, p. 49).

These quotes reveal that, for Husserl, to talk about the *scientific* character of phenomenology is to talk in the same breath about how phenomenology is responsible for the articulation of laws. On this basis, it can be concluded that *phenomenology is a nomological discipline* in that, simply, it articulates laws. Furthermore, the above quotes show that the laws that the phenomenologist articulates are grounded in intuitions of concepts, concepts which are clarified via the process of dialectical disambiguation such as that which occurs during task one of pure logic. Thus, these laws, which Husserl concludes the phenomenologist articulates, are the very same laws that he is referring to when he describes the second goal of pure logic. The phenomenologist carries out the second task after they have completed the first.[8]

3.5 | Relation between the second and the third task

On the basis of our discussion concerning the first, second, and third tasks of pure logic above, it should already be clear to the careful reader, that the laws, which the phenomenologist articulates in carrying out the *second* task of pure logic, serve as the pure, axiomatic, and regulative laws for the *third* task of pure logic. Not only are the laws of pure logic (discovered via task two) derived from clarified concepts (from task one), but those laws also then serve as grounds for the metascience carried out in the third movement of pure logic. Husserl writes that,

> Logical justification of a given theory as such, i.e., justification in virtue of its pure form, demands that we go back to the essence of its form, and so to *the concepts and laws which are ideal constituents of theory in general* (the 'conditions of its possibility')... each putative theory only is a theory to the extent to which it accords with these concepts or laws.
>
> (Hua XVIII, p. 243/Husserl 1970, p. 152)

In other words, the concepts and laws determined through carrying out of tasks one and two, provide a justification of a science precisely in virtue of its formal features. The laws articulated in task two are the regulative laws from which task three begins.

Let us take stock before moving on to execute our own original argumentation. We list four core points, which should be kept in mind throughout our discussion in section four. The order of these ideas differs somewhat from our exposition, in that it begins with the first task of pure logic.

It was shown, in Section 3.2:

1. *Phenomenology is involved in the clarification of concepts during the first task of pure logic.*

Moreover, the reason that Husserl thought that phenomenology is not explanatory is because he thinks, quite rightly, that the practice of conceptual clarification differs in kind from the practice of deductive explanation from unifying laws. Then, in Section 3.4, we demonstrated:

2. *Phenomenology ought also to be involved in the second task of pure logic; namely the articulation of laws following from the clarification of concepts.*

In Section 3.5 we uncovered the connecting insight:

3. *These laws then serve as the unifying axioms from which the third task begins.*

Finally, in Section 3, we revealed:

4. *The third task of pure logic is a metascience which involves the construction of the forms of all possible theories starting from the above-mentioned unifying axioms.*

This metascience, which the mathematician is responsible for constructing, proceeds deductively from unifying, axiomatic laws and should be, for this reason, considered explanatory according to Husserl's account of explanation as laid out in section two.

In this shift from the first to the third task, it thus initially appears that we have begun a phenomenological investigation—which identifies and clarifies the fundamental concepts and laws—and then subsequently execute an explanatory analysis—which outlines a *Mathesis Universalis*.

4 | ORIGINAL THESIS

4.1 | Phenomenology is de facto explanatory

Having completed our limited historical analysis of Husserl's theories of explanation, science, and phenomenology, in this concluding section we finally argue for our original contentious interpretation, that phenomenology, as Husserl outlines it, is de facto explanatory. We corroborate this reading—which stands in contrast to Husserl's own explicit claims and equally so, in distinction from interpretations of him—in two steps.

First, in light of the fact that phenomenology articulates laws, we show that a new defense is needed for the idea that phenomenology is not explanatory; a different reasoning than the one outlined in Section 3.3 above.

Second, we ultimately reject the only possible defense available for the interpretation that Husserl's phenomenology is not explanatory. This leads us—inescapably—to the conclusion that, because phenomenology is nomological, it is explanatory.

4.2 | A new defense of phenomenology as not explanatory

We saw that Husserl holds the thesis that his phenomenology is not explanatory, because it is involved in the first task of pure logic—and the activities of this first task are certainly not explanatory. However, in order to maintain the idea that phenomenology is not explanatory, it must also be the case that *the second task of pure logic*—the articulation of laws—is also not explanatory. *Prima facia*, Husserl's conclusion that phenomenology carries out the second task of pure logic increases the difficulty of defending it as non-explanatory merely because, in carrying out that second objective, phenomenology de facto qualifies as a nomological discipline. It therefore plays an analogous role to the nomological disciplines that occupy the second tier of the regular scientific field.

All this in mind, how can Husserl defend the interpretation that phenomenology is not explanatory, given that he has described it as nomological? One defense interpreters might offer is to say that *in the strict sense*, the phenomenologist's task is complete once the fundamental concepts are clarified and the laws are articulated. One might also want to distinguish between merely *articulating a law* and subsequently *using it in an explanation*—that is, using the articulated law as a major premise in an argument where the explanandum follows as consequence. Moreover, utilizing these laws as axioms for the deductive construction of the forms of all possible theories is *precisely* where

explanation begins. And so, we suppose that other scholars might offer this argument to defend the idea that Husserlian phenomenology is not explanatory, despite the fact that it articulates laws. We call this the "articulating but not employing" defense.

We emphasize that this defense relies on a fine distinction. To say that

1. Husserl's phenomenology is not explanatory, because it is in the business of concept clarification via disambiguation but leaves the *Mathesis Universalis* to the mathematician,

is quite different than saying

2. Husserl's phenomenology is not explanatory, because it articulates laws but does not employ them.

Critically, (1) is *explicitly* supported in Husserl's works, while (2) is at best only implicitly supported. (2) is only a thesis that *we* have articulated to charitably find consistency among Husserl's seemingly antithetical conclusions: phenomenology articulates laws and thus appears to be nomological, yet phenomenology is not explanatory. (2) is, we think, other interpreters' best defense when confronted with the nomological status of phenomenology.

4.3 | The inadequacy of the "articulating but not employing" defense

Even though it is a best defense, we think that this "articulating but not employing" response is inadequate. In denial of this "articulating but not employing" defense, we argue that, in fact, Husserl has de facto cast phenomenology as an explanatory discipline in the *Prolegomena*. That is, we argue that one cannot read Husserl as consistently holding (B), when considering everything else he has said about philosophy, explanation, and the sciences. Specifically, *if phenomenology is a nomological science—as Husserl claims and as is the case—then simply, we must interpret his phenomenology as* de facto *explanatory*. Below, we offer two arguments for this conclusion.

4.4 | An argument from analogy

The "articulating but not employing" defense relies on a distinction between the sciences, which articulate laws, and the sciences, which employ those laws in providing explanations. Let us turn, briefly, to how the distinction between sciences that articulate and sciences that employ laws plays out in the tiers of standard science.

When discussing the relationship between the first and second tiers of science, Husserl observes in one passage that "One ordinarily distinguishes between concrete and abstract natural sciences and calls the former descriptive" (Hua XXX, p. 338/Husserl 2019, p. 356). His point in saying as much is to float the idea that, as these sciences are descriptive, perhaps we ought not to consider them explanatory. Counter to this, however, Husserl goes on to say, as we have pointed out, that it is indeed the concrete sciences which "bring the particular under the law-concepts of what are called the abstract sciences precisely for purposes of explanation" (Hua XXX, p. 338/Husserl 2019, p. 356). Concrete sciences are thus explanatory because they borrow laws from the corresponding nomological discipline above them in order to construct explanations. In other words, the concrete sciences employ but do not articulate explanatory laws and are for this reason explanatory.

Husserl's conclusion from this, however, is not that *only* the concrete sciences are the explanatory ones, but that instead *both* the abstract, nomological sciences *and* the concrete disciplines "are explanatory, each in its manner" (Hua XXX, p. 338/Husserl 2019, p. 356). It was a *given* that the nomological sciences should be called "explanatory," the only question Husserl was answering in this passage was whether the so-called "descriptive"

sciences should be deemed explanatory *as well*. In other words, both the sciences that articulate laws, and the sciences that employ laws, ought to be considered explanatory, at least as far as the relation between tiers one and two is concerned.

In support of this conclusion that nomological sciences are explanatory in their own right, it is worth heeding that when Husserl is considering what to term the sciences in tier two in the *Prolegomena*, he states that we might choose to call them either "abstract," "theoretical," or "nomological," but he then adds that he is happy also to call these sciences "explanatory." He adds that we may call them explanatory bearing in mind that they articulate laws for the purpose of carrying out the unifying, explanatory function of science, but do not then employ those laws for the purposes of providing an explanation. This passage is worth reproducing in full.

> The sciences whose field is determined by the standpoint of theory, of unity of principle, which embrace in ideal closure all possible facts and general items whose principles of explanation have a single lawful base, are called, not very suitably, abstract sciences. The best name for them would really be theoretical sciences … one could say … that these sciences are nomological, in so far as their unifying principle, as well as their essential aim of research, is a law. The name 'explanatory science' which we have used from time to time, will also do, provided it is used to stress the unity reached by explanation, rather than explanation itself.
>
> <div align="right">(Hua XVIII, p. 236/Husserl 1970, pp. 147, 148, trans modified).</div>

Thus, we have precedent for thinking that the sciences which are merely engaged in the articulation of laws ought to be deemed explanatory, even though it is the concrete sciences (in this case at least) which employ the laws they articulate in a subsuming deductive-nomological explanation. Indeed, for Husserl, the abstract nomological sciences just *are* the *explanatory* sciences; the articulation of laws is the lynchpin of explanatory practice due to the unifying function that laws play. So, even though it is right to say that the nomological sciences do not *provide* explanations, they are certainly intimately implicated in the explanatory nexus, if not at the center of it.

Based on this precedent one could reason analogously that, there are good grounds to think that the discipline involved in the articulation of laws during the second task of pure logic ought to be deemed explanatory, even though it is the mathematician who employs the laws thereby articulated in a subsuming deductive-nomological explanation during the *Mathesis Universalis* in the third task of pure logic. As the discipline that articulates laws during task two is none other than phenomenology, phenomenology is an explanatory science.

4.5 | The argument from interlawful explanation

We now present our second argument in support of our conclusion that Husserl's phenomenology is de facto explanatory. We previously mentioned that *within* nomological sciences, there is interlawful explanation, that is, the explanation of one law by another law of a higher level of fundamentality (see Section 2.2). Now, the sorts of laws which are articulated during task two are the most fundamental. Uber-fundamental. No further law could possibly govern the laws which govern pure form and so there is no further back our inquiry could go.

However, finding and articulating fundamental laws is a *process*; it is not as if one simply plucks them out of thin air, like an archer hitting some hitherto unseen target. Instead, one might assume that, during the search for these most fundamental axioms during task two, slightly-less-than-fundamental laws are at first found. These slightly-less-than-fundamental laws are then reductively *traced* to ultimately primitive and basic laws.

Husserl himself concedes this point explicitly when he is discussing the second task of pure logic (see Hua XVIII, pp. 247, 248/Husserl 1970, pp. 152–154). He states that the laws which we articulate in task two are "in themselves theories." Examples of the theories (i.e., bodies of laws) which belong here include "theories of inference,

e.g. syllogistics ..., the pure theory of pluralities ..., the pure theory of numbers," and so forth. However, he goes on to say that

> All the laws here belonging *lead to* a limited number of primitive or basic laws ... They must, in virtue of their homogeneity, serve to base an all-comprehensive theory, which will contain the separate theories just mentioned, as relatively closed elements in itself.
>
> (Hua XVIII, p. 248/Husserl 1970, p. 154, italics ours)

Our readers, we are sure, have noted that this description can be matched almost word-for-word with everything Husserl has said elsewhere about interlawful explanatory theories and the essence of scientific explanation through unification (see Section 2.3 and 2.4).

Such a reductive tracing is the paradigmatic sort of activity that constitutes interlawful explanation within nomological science; it *is* the *articulation* of an interlawful explanation. By noting that a slightly-less-than-fundamental law leads to a fundamental one, we are thereby providing the *grounds* of the former law and explaining it. This kind of activity would go on within the fulfillment of the second task. Thus, the phenomenologist, in carrying out task two, will not *only* articulate laws but *will* as a matter of fact *employ* them when carrying out an interlawful explanation within its own discipline.

Notice, moreover, that we can find examples of such interlawful explanation all over within the phenomenological project, and this broader point should not be skipped over lightly. For instance, it is a law that every act of perception has both a matter and a quality. This less than basic law, however, is explained in terms of the more general and fundamental law that every intentional act whatsoever has a matter and a quality. In clarifying this fundamental law through intuition, we also make intelligible why it holds for perceptual acts in general, or this or that (type of) perceptual act in particular. So, even if readers doubt our detailed exegesis of the labyrinthine tasks of pure logic, the basic point still holds that phenomenology is explanatory by Husserl's own account of explanation.

5 | CONCLUSION

To briefly summarize, this paper contributes to phenomenological philosophy in two ways. First, we presented an original way to understand Husserl's claim that phenomenology is not explanatory, which stands in distinction from all readings of Husserl's work to date. Second, we have shown that this conclusion—when correctly understood—is untenable. Husserl inadvertently defines the tasks or goals of his phenomenology in such a way that it is de facto explanatory. Because Husserl describes phenomenology as involved in the articulation of (uber-fundamental) laws, and because slightly-less-than-fundamental laws will be traced back to these along the way, his phenomenology is explanatory.

CONFLICT OF INTEREST STATEMENT

On behalf of all authors, the corresponding authors affirm that there are no conflicts of interest.

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ENDNOTES

[1] We provide references to the corresponding English translation where available, following a slash after the Husserliana pagination. Quotes from the Logical Investigation always come from the First Edition. Although the Logical Investigations is our primary source, we also draw extensively from his Logic and Theory of Science (Hua XXX), a text delivered as lectures in 1918. There is therefore evidence to suggest that Husserl held the position we depict here well into his middle period.

[2] Obviously, in the first edition of the *Investigations*, Husserl termed his philosophy, "descriptive psychology," instead of "phenomenology." For all intents and purposes, however, Husserl was already executing the latter in 1900–1901 (see Byrne, 2020a, 2020b).

[3] In what follows, we only provide Husserl's theory of explanation so that we can begin to separate it out from the role of phenomenology (as discussed in section three and four). Our account here is for that reason only skeletal. Readers looking for more detail, including a definitive proof of the fact that Husserl was indeed operating with the account we lay out in section two, along with a defense of Husserl's account, should refer to Hardy (2014) and Williams and Byrne (2022).

[4] Note that only the major premise must be drawn from the tier above. The second premise might not derive from the tier above. It is therefore not that the conclusion must fall out as a deductive consequence from premises drawn only from the tier above. Thus, the laws alone do not explain, but the universal premise is always drawn from the tier above and the subsuming/unifying activity stems from this. It is the law which allows for us to deduce many consequences from a limited number of premises. Compare Section 2.4.

[5] When Husserl discusses explanation within tier three science, he has in mind what has come to be referred to as intra-mathematical explanation (that is, the explanation of one mathematical fact by another).

[6] This is the case so long as the materials of the meaning abide the meaning-forms of the formal meaning-laws See Hua XIX, p. 362, p. 62. See also Byrne, 2018, 2021.

[7] If Hartimo is right that what Husserl has in mind here is a model theory, then it is right to say that the third task of pure logic *is* largely worked on by mathematicians.

[8] One interpretive problem is that, in section 68 of the *Prolegomena*, Husserl identifies syllogistics as a part of task two and, later in section 71 of the *Prolegomena*, states that the "elaboration of syllogistic theory… has recently been taken over by mathematicians" (Hua XVIII, p. 250/Husserl 1970a, p. 158). This leads to the possible conclusion that Husserl actually thinks that it is the mathematician who performs task two. The way we have resolved this challenge is to conclude that the elaboration of syllogistics discussed in section 71 and the articulation of the pure laws of syllogistics (spoken of in section 68) are different. Our central reason for this reading is that, Husserl is adamant in section 71 that "the mathematician constructs theories of… syllogisms… *without ultimate insight into the essence of theory in general, and that of the concepts and laws which are its conditions*" (Hua XVIII, p. 251/Husserl 1970a, p. 159, our italics). What Husserl is talking about regarding the mathematical developments of syllogistics is the Fregean symbolic logic as developed in his *Begriffsschrift*. This contrasts heavily with the strictly philosophical problems such as those raised in Frege's *Grundalgen* and Husserl's *Philosophy of Arithmetic*, which is what we think Husserl has in mind with his account of the first and second tasks of pure logic. We thank a thoughtful reviewer for raising this challenge to our thesis.

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