“The analytic breakdown of language, which was first rigorously performed by Frege, is the unique and essential philosophical move of the analytic tradition.”
The Analytic Tradition in Philosophy stems from the work of German mathematician and logician Gottlob Frege. Bertrand Russell brought Frege's program to render language—particularly scientific language—in formal logical terms to the forefront of philosophy in the early twentieth century. The quest to clarify language and parse out genuine philosophical problems remains a cornerstone of analytic philosophy, but investigative programs involving the broad application of formal symbolic logic to language have largely been abandoned due to the influence of Ludwig Wittgenstein's later work. This article identifies the key philosophical moves that must be performed successfully in order for Frege's "conceptual notation" and other similar systems to adequately capture syntax and semantics. These moves ultimately fail as a result of the nature of linguistic meaning. The shift away from formal logical analysis of language and the emergence of the current analytic style becomes clearer when this failure is examined critically.
Gottlob Frege (1848-1925) aimed to formalize the language of science such that the notation by which science expressed itself corresponded to the rigorous objectivity of the scientific worldview. Out of mathematics—specifically the concepts of function and equality—Frege derived a logical system in which ordinary language is represented by "truth functions," and meaning is represented by equality. This novel representation of language as a formal syntactical system purports to account for semantics as well. Frege's formal, objective systematization of language marks the beginning of the analytic tradition.

The "conceptual notation" is made possible by two parallel deconstructions of ordinary language: (1) the reduction of ordinary grammatical structure—that is, the sentence—into subject and predicate, and (2) the breakdown of ordinary semantics into sense (Sinn), reference (Bedeutung), and idea. Subsequently, Frege correlated mathematical functionality with linguistic predication and mathematical equality with linguistic "truth value"—"the circumstance that it [the sentence] is true or false." The philosophical path by which Frege arrives at his "formal language" consists generally in these two steps.

I will refer to the reduction of ordinary syntax to predication performed in parallel with the parsing of ordinary semantics as the analytic breakdown. I will refer to the correlation of linguistic component to logico-mathematical symbols as the formal correlation. The analytic style—as it was originally conceived—fundamentally consisted of these two philosophical moves.

Briefly, the formal correlation consists in ascribing formal notation and syntax (a formal system) to an informal system. This usually involves the mathematization of non-mathematical content, but the formal system applied need not be strictly mathematical. Frege's "conceptual notation" is an example of a formal system that is not strictly mathematical, though it conserves the priority of logical relations between symbols.

As pointed out by Edmund Husserl (1859-1938) in The Crisis of European Science, the philosophical move that I have called the formal correlation has been and continues to be critical to the success of the scientific worldview. Galileo, Descartes, Newton, and others have used the formal correlation to describe shapes and physical bodies mathematically. Leibniz even proposed the idea of a universal notation, capable of accommodating everything within one formal system. Therefore, the formal correlation performed by Frege—although an interesting interpretation—does not constitute a new kind of philosophical move. I quite admire the ingenuity of Frege's application of the formal correlation, but I will not further discuss his "conceptual notation" and the correlation of argument and function with subject and predicate, resulting in the "truth function" formulation of language.

The analytic breakdown of language, which was first rigorously performed by Frege, is the unique and essential philosophical move of the analytic tradition. This move aims to transform language—already a complex syntactical and semantic system—in such a way as to allow the application of the formal correlation.

Applying Husserl's method of remembering forgotten philosophical steps, I will trace the moves that Frege made in performing his analytic breakdown. This Husserlian analysis reveals that the analytic breakdown ultimately fails to achieve a total reformulation—that language fundamen-
tally resists complete formalization. The specific nature of this failure limits the analytic tradition such that, at most, it prescribes a philosophical style, which, like Socratic discourse, is a useful tool, but far from a strict philosophical method. In short, the general utility of the analytic breakdown for addressing philosophical problems is severely constrained by its failure to clarify language to the point where it is sufficiently objective to be formalized.

II

Language as we know it has both syntax and semantics. Specifically, the words and phrases we use have both grammatical meaning according to their function in correctly formed sentences (syntax) and intrinsic meaning (semantics). The reduction of grammar to subjection and predication concerns the syntax of language, while the parsing into Sense (Sinn), Reference (Bedeutung), and more broadly Idea concerns semantics.

Consider a simple sentence: “The boy is German.” This is a grammatical English sentence, for the article (“the”), the noun (“boy”), the adjective (“German”), and the verb (“is”) perform functions within their linguistic jurisdiction as articles, nouns, adjectives, and verbs. From the grammatical function of each word in the sentence—the syntax—I can tell that the verb involved is being, the boy is the subject since he “does the being,” so to speak, and German is the subjective complement—that which the boy is.

In addition to being grammatical, the sentence makes sense because it is reasonable to say, “The boy is German.” Why is this the case? The short answer is that the sentence has properly coordinated semantic content. We know what a boy is, having seen them running around our neighborhoods (some of us once were boys ourselves!). In the same way, we know what it means to be of German origin, and we know what the act or state of “being” is. Consequently, we know that a boy is subject to any number of states, that the German nationality is one such state, and that “to be” is the

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proper verb for expressing a state or characteristic. Therefore the sentence is reasonable.

We can see from this simple example that although syntax and semantics are related, they are two different aspects of language. This distinction necessitates at least two philosophical moves—one addressing syntax and another addressing semantics—in order to prepare ordinary language for formalization. Frege recognized not only the necessity of this “pre-formalization,” but specifically that this step must result in both a rigorous simplification in grammatical syntax and an elimination of intuition from semantics “to keep the chain of reasoning free of gaps.” Only such a step would enable the assimilation of ordinary language into conceptual notation. Thus Frege conceived the analytic breakdown as a syntactical reduction accompanied by a semantic deconstruction.

III

In order to bring linguistic syntax down to size, Frege reduces the complex grammatical syntax of language to predication. More specifically, he makes the case that all concrete statements can be reformulated into a subject-predicate structure, wherein the predicate articulates a “judgment” about the subject mediated by the verb “to be.” This judgment can either be true or false depending on the subject, and this judgment becomes the primary information communicated by the syntactical structure. The importance of the verb—particularly with regard to tense, but also with regard to voice and number—is downplayed dramatically. Given the large number of verbs in any language, this reduction is stunning. Again, an example can clarify this critical shift toward predication syntax.

It is not so difficult to see how “The boy is German,” fits into predication syntax. The boy comprises the subject, and the predicate contains a judgment about German-ness related to the boy mediated by a form of “to be.” But how can a grammatically syntactical sentence containing a transitive verb be accommodated by predication syntax? Consider the sentence, “The boy throws the ball.” In order to express “The boy throws the ball,” in predication syntax, the sentence must be reformulated to, “The boy is throwing the ball.” The action of the transitive verb “to throw” is converted into a judgment about the boy mediated by “is.” In an important sense, action is converted into a state or characteristic, and the subject is converted from an agent performing an action into an object undergoing judgment.

The sentence above is, of course, a simple example demonstrating the principle of converting grammatical syntax into predication syntax, but Frege dedicates a large portion of the chapter entitled “Sense and Meaning” to articulating the method by which even complex sentences—sentences in which whole phrases contribute to in grammatical syntax—may also be converted into predication syntax. Frege proposed that the method sketched above can restate a significant portion, if not all, grammatically syntactical statements in predication syntax. The result is that even the most complex sentences can be expressed as a subject and a judgment about that subject, achieving the requisite simplification of grammatical syntax.

IV

While the syntactical reduction of Frege’s analytic breakdown is essential, the semantic deconstruction is at once more difficult and more controversial. As we will see, the success—or failure as I argue—of the analytic breakdown depends on the success or failure of the semantic deconstruction. But let us first trace the deconstruction before analyzing it.

As stated above, Frege’s semantic deconstruction involves parsing the semantic content of linguistic units or “signs” into two distinct aspects of meaning: Sense (Sinn) and Reference (Bedeutung). He later distinguishes between Sense and Idea, but the critical importance of this distinction cannot be clarified until the original distinction is traced. Therefore to understand Frege’s philosophical move, we must first examine Sense and Reference.
The Sense of a sign is the part of its meaning "wherein the mode of presentation is contained." This concept is difficult to define precisely, and Frege himself can only illustrate it by examples, most prominently that concerning the names "morning star" and "evening star" for the planet Venus. The Sense of "morning star"—a heavenly body appearing as a star in the early morning—is quite different from that of "evening star"—a heavenly body appearing as a star in the evening. In a similar way, the pronouns "I" and "me" are both names for myself, but their Sense is distinct: "I" acts as a subject in a sentence whereas "me" acts as an object. Therefore the Sense of "morning star" differs from that of "evening star" as a result of the adjectival modification of the mode of presentation; the Sense of "I" differs from that of "me" as a result of the functional modification (change in grammatical function in the sentence) of the mode of presentation. Even though in both cases the signs represent different names for the same thing, both the two signs for Venus and the two signs for the first-person singular differ in meaning by differing in Sense.

Implicit in our discussion of Sense is the second aspect of meaning: Reference. Reference is the property of signs as designators of objects—that is, "any designation . . . has as its meaning a definite object (this word taken in the widest range). The signs "morning star" and "evening star" may differ in their Sense, but because both refer to Venus, the signs are the same in their Reference. Concordantly, because both "I" and "me" refer to the first-person singular, the two signs are the same in their Reference. Notably, the object of Reference may be either a physical object (Venus) or a concept (first-person singular). So long as the referenced object is relatively defined, it serves perfectly well.

Thus the meaning of a sign is divided into Sense and Reference. "The regular connection between a sign, its sense, and what it means is of such a kind that to the sign there corresponds a definite Sense and to that in turn a definite thing meant," says Frege. Certainly both are required to obtain "comprehensive knowledge of the thing meant," but these two aspects of meaning differ in some important ways. For Frege, the critical difference between Sense and Reference is this: Sense is subject to change based on the particular sign and its use in context, whereas Reference is unchanging within the set of signs referring to a given object. Put another way, a sign with a particular Sense has only one Reference, but a Reference can have many signs, each with a different Sense. I can point to or at least state the specific Reference of any sign independent of the context in which that sign appears, and that Reference never changes. Whether I use "morning star" or "evening star," if you ask me what I mean, presumably I can say, "Venus!" or at least point it out in the sky. If the object is the same for two signs, then the signs share meaning with respect to Reference, but this sharing does not affect the singularity of the object referenced. There are not two planets called Venus because it has two signs that reference it.

In contrast, the meaning of a sign with regard to Sense necessarily changes depending upon the "mode of presentation [i.e. the context]" of the sign. "Evening" is different from "morning" by definition; thus, the two signs refer to different times of day. This modal dependence of Sense re-
quires some interpretation in order to apprehend. In many cases, this interpretation—like knowing the difference between “morning” and “evening”—is relatively easy for a person “sufficiently familiar with the language.”

This modal knowledge requirement for apprehending Sense provides a point of entry for intuition and, therefore, for errors in determining the precise meaning of a sign. In other words, Sense becomes dependent, however slightly, on the individual’s capacity to interpret the language being used. I will not apprehend the Sense of “morning star” and “evening star” if I do not know the definitions (again, in the dictionary sense) of “morning” and “evening.” Any penetration of the subject’s inherent linguistic capacity into the analytic breakdown cannot be tolerated, for this subjectivity insolubly resists the formal correlation.

VI

Frege knew that if the Sense of a sign could be even partially observer dependent, he would not be able to apply the formal correlation, and his conceptual notation would be undermined. Therefore, in an attempt to preserve Sense as a general, objective concept, he introduced a distinction between the modally dependent aspect of meaning (Sense), which remains objective through its grounding in the contextual use of the sign, and the observer dependent aspect of meaning (Idea), “an internal image, arising from memories of sense [sensory] impressions . . . both internal and external . . . [and] imbued with feeling.”

In order for his conceptual notation to be applicable to any statements at all in ordinary language, Frege must assert that Idea is not a universally significant aspect of a sign’s meaning. The decisive move of the semantic deconstruction is the insistence upon Idea as a third and categorically distinct aspect of meaning and its subsequent subordination to Sense and Reference in certain cases. Frege’s semantic deconstruction outright rejects the notion that the subject’s (i.e. language user’s) inherent linguistic sensibility is, in all instances of language, inextricably linked to subject’s linguistic capacity. He rejects that Idea always plays a role in the use and understanding of language. Frege asserts that Idea plays a trivial role in all but highly metaphorical forms of language, like poetry. For him, the primary difference between “The boy is German” and “Let us go then, you and I, When the evening is spread out against the sky/ Like a patient etherised upon a table” is that the semantic content of the first sentence is accounted for by Sense and Reference, whereas that of the second requires Idea in addition to Sense and Reference to be understood properly.

The conceptual notation cannot be used for language in which Idea plays a significant role alongside Sense and Reference in the determination of meaning precisely because a high degree of observer dependent assignment of meaning precludes the objectivity necessary for semantic content to be formalized. In order for the semantic deconstruction—and consequently the analytic breakdown—to be even partially successful, Frege must relegate observer dependent meaning only to certain forms of language. Were he to affirm Idea as equally determinant compared with Sense and Reference, or to integrate Idea into Sense, the analytic breakdown would fail to render any form of ordinary language amenable to the formal correlation. The semantic content of all language would contain a fundamentally subjective aspect that could not be eliminated.

Thus, he insists that there are “three levels of difference . . . at most the ideas, or the Sense but not the meaning [Reference], or, finally, the meaning [Reference] as well” (SM 161). Sense and Reference, as Frege conceives them, are definite aspects of a sign’s semantic content. This definitive, objective nature allows them to be rendered in conceptual notation by applying the formal correlation. He admits that where observer dependent Idea is significant in the determination of semantic content, the formal correlation cannot be applied. He contends, however, that in a significant portion of linguistic formulations, Idea has a trivial effect on the semantic content of signs. In this way, Frege implemented the first analytic breakdown of language and laid the foundation for the analytic tradition.
VII

The *propositional analysis* of language enabled by Frege’s analytic breakdown is in many ways carried to its logical conclusion in Ludwig Wittgenstein’s (1889-1951) first seminal work, the *Tractatus Logico-Philosophicus* (1921). Wittgenstein fully expounds the assertion that there is a distinction between certain issues that philosophy can address and others that it cannot. The line is drawn between what is articulate—sufficiently objective to be formalized and analyzed—and what is inarticulate—too observer dependent to yield to the analytic breakdown. We have just seen the origin of this distinction in the Frege’s semantic deconstruction.

After publishing the *Tractatus* Wittgenstein retired from philosophy, believing that he had clearly defined this line between what kinds of concepts and issues were “fair game” and which could not be addressed. Wittgenstein then served as a schoolmaster in Austria, where he remained until 1929, when he returned to Cambridge with a reimagined perspective on the philosophical position that he had been instrumental in solidifying. The powerful criticisms he leveled against his analytic contemporaries—particularly against what I have called the semantic deconstruction—are put forward as collected musings in *Philosophical Investigations* (1953). The argument with which Wittgenstein challenges the possibility of the semantic deconstruction—commonly referred to as the “family resemblances” argument—is sufficiently compelling to call into question the analytic breakdown, the original philosophical move of the analytic tradition.

It is notable that Wittgenstein’s musings on this point in *Philosophical Investigations* appear as an informal series of thought experiments and observations, and not a formal argument. As a result of this presentation, philosophers often get into trouble when attempting to interpret Wittgenstein’s work, especially the concept of meaning as “family resemblance.” As I see it, the “family resemblances” argument is fairly evident, so I aim only to articulate and not to interpret. It is necessary, however, to do some “stringing together” in order to clarify the nature of Wittgenstein’s criticism of Frege’s semantic deconstruction. In light of the body of literature on the topic, it is important to make clear to the reader my intended use of Wittgenstein’s idea.

VIII

I stated in Section VI that the critical step in Frege’s semantic deconstruction—the step that allows the complete execution of the analytic breakdown—is the separation of observer dependent meaning (Idea) from both Sense and Reference. The success of this separation is paramount. I think that I have sufficiently explained why this is the case and why Frege is so concerned with the sequestering of Idea to forms of language which he does not aim to formalize. It is precisely this situation that Wittgenstein’s “family resemblances” argument questions.

The essence of Wittgenstein’s criticism is this: instead of “producing something common to all that we call language, I am saying that these phenomena have no one thing in common which makes us use the same word for all—but they are related to one another in many different ways . . . and it is because of this relationship that we call them all ‘language.’” He makes three assertions here: (1) the Reference, not the Sense, is the point of entry for subjectivity, (2) as a result, a given word—or sign according to Frege’s terminology—has no concrete common refer-

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ence, and (3) relatedness based on use (Sense), not commonality, is the fundamental feature of language.

These three ambitious claims are best understood sequentially, so first claim first. Frege certainly understood the problem of the observer dependent aspect of meaning, but he located subjectivity's point of entry in the Sense meaning of a word—what Wittgenstein calls use. Wittgenstein thinks that this point of entry is incorrect because—in consideration of how language is actually exercised—the same word appears in the same way in the same sentence, regardless of the user. When I say, "The boy is German," and when you say, "The boy is German," we are both using the words "the," "boy," "is," and "German" in the same way.

Proper use—being a function of both grammatical syntax and proper understanding of the words—cannot be dependent on the language user, or there would be no standard grammar and we could use words however we pleased. This is not the case: "German is the boy," is unintelligible because the speaker of this sentence has used the words improperly. Therefore, in order for any linguistic expression to be intelligible to its speakers, not only must there be proper uses and improper uses of words, but the words composing the expression must conform to standards of proper use. In other words, Sense cannot be personal, or no one would be able to communicate.

If even some words had a subjective Sense, this would constitute a private language. Wittgenstein extensively considers the possibility of a private language and comes to the conclusion that it is impossible by virtue of its impracticality. I will not elaborate much further on this point, but I think the principle is demonstrated by a simple example. Consider the gibberish a young child will concoct to communicate with imaginary friends. The child understands this pseudo-language perfectly well (and, presumably, so do his imaginary friends!), but if he were to say, "Gaggle bennar gibblemony," instead of, "I like water," I will not have the foggiest idea what he means because I do not have access to the Sense in which those words are used. What is important, again, is that each word must be used properly according to its standard uses (Sense) in a language in order for a valid sentence to be formed.

Let us return to the example "The boy is German." Each of these words has Sense in that they are all used properly, resulting in an intelligible English sentence. But what is meant by the word "German"? More specifically, what is referenced by the word "German" and what actually happens when I conjure that reference? Earlier, "German-ness" sufficed as the Reference, but "German-ness" is quite nebulous. Does it mean "of German descent"? or "from the country Germany"? The same ambiguity exists with "boy."
Does it mean “a small male,” “a young male,” or “an immature male”? There does not appear to be any “boundary” designating what is referenced by “German” or “boy”: “the extension of the concept is not closed by a frontier.” Reference, therefore, is not really concrete at all.

What is more, not only is meaning with regard to Reference not concrete, it cannot be concrete and specific. Here Wittgenstein uses a helpful example. If I am shown a series of pictures of leaves and told, “These are leaves,” I will obtain a usable definition of “leaf” such that I am competent to identify another, different leaf as “leaf.” How do I do this? One might say that it is because I have an idea of what “leaf” is, or more clearly, a “schema” of “what is common to all shapes of leaf.” In order for this to be the case, this schema of “leaf” must appear in my mind “not as the shape of a particular leaf.” If the “leaf” schema were specifically representative of a particular leaf, if I saw any other leaf I would not be able to identify it as “leaf.” This is not the case because I certainly can identify leaves of many shapes and colors as “leaves,” and any language user can do this as well.

Furthermore, what is true of “leaf” is true of “boy” and “German,” and I see no reason why it could not be true of any word’s usable definition. And it must be so, for Reference must be sufficiently non-specific to accommodate all instances of a word’s use—even previously unknown use. But if behind each word lies an unbounded mental schema of what that word means that is necessary for proper use of the word, then Reference is inherently observer dependent. This is because “if someone were to draw a sharp boundary I could not acknowledge it as the one that I too always wanted to draw, or had drawn in my mind.”

This “unbounded-ness” may seem odd, but consider the way we actually use language. We do not have a word for every specific leaf in the world, as would be the case in a language with concrete Reference. Even efforts to make reference concrete only go so far. Although “We can draw a boundary—for a special purpose,” narrowing “boy” to “Jim Smith” only narrows boy so far because there is more than one boy named Jim Smith (I know at least two personally). Therefore, a certain subjectivity is inherent to Reference and cannot be eliminated without denying critical features of the way in which we actually use language.

IX

Accepting the subjectivity of Reference “with blurred edges,” Wittgenstein himself asks the key question: “Is it only other people whom we cannot tell exactly?” Put another way, “if the concept . . . is uncircumscribed like that, you don’t really know what you mean.” This is apparently false, for I certainly know what I mean when I say, “The boy is German” even if I cannot specify the exact reference of each word. Were it not the case that I had working definitions of these words, I would not be able to use them correctly. It is clear that I know what I mean because correct use implies a correct usable definition.

The first question is more interesting and more difficult. How do other people know what I mean when I properly use words if that proper use is based on a usable definition of the word derived from a “blurred edge” Reference. Wittgenstein employs the concept of “game” to explain this phenomenon in terms of “family resemblance” between each person’s usable definitions of a word. Chess is different from tennis, and yet they are both “games.” They are both games not because there is “something common to all, but [because] similarities, relationships, and a whole series of them at that” link chess and tennis. In passing between games, “many common features drop out, and others appear,” but what remains are “correspondences with the first group.”

Such is the case with a word. When passing between individual’s usable definitions of a word, there is no one thing in common, but many correspondences. Where my usable definition of “German” might include my friend Matthias (who is German), the spoken language (“scheissekopf” could be my favorite word in any language), Faust and
Goethe, Nietzsche, Berlin, etc. whereas my friend Matthias’ usable definition might include different people, sounds, literature, philosophers, places, etc. which are nonetheless of the categories people, sounds, etc. By these correspondences “German” is communicable in any proper use between Matthias and I, even though we do not have a common usable definition of “German.” Thus the proper conception of language is not a set of defined propositions as Frege asserts (at least in certain areas), but rather “a complicated network of similarities overlapping and criss-crossing.” The strength and incredible utility of language lies not in universality, but “in the overlapping of many fibres”—in the very capacity of a word to accommodate richness in meaning.

Wittgenstein’s criticism of Frege’s conception of Reference as specific and concrete—“an area” with clear boundaries—is quite powerful. It reveals that the semantic deconstruction—the critical step in the analytic breakdown of language into propositions—is executed by means of a false premise. In doing so, Wittgenstein calls into question any transformation, analysis, and conclusion about language and about philosophical issues performed on the shoulders of the analytic breakdown. As a result, this approach to analytic philosophy cannot serve as the basis for a system able to address a wide range of pressing philosophical issues; it makes assertions about linguistic form and meaning that are demonstrably false.

I believe the lesson of the failure of the analytic breakdown is this: the task of philosophy is to articulate, clarify, and examine those phenomena that are the case. The task is not, as Frege puts it, “to break the power of the word over the human mind . . . freeing thought from that which only the nature of the linguistic means of expression attaches to it.” It is not generally the case that we experience thought detached from language, although this is certainly true for some forms of thought—like prayer. To assume otherwise cannot lead to clarification of philosophical issues, for one is performing operations on artificial constructs that do not exist in “the life world,” as Husserl would say. When these constructs become complex and compelling—as a formal notation encompassing language certainly is—it requires the clear thinking of a Ludwig Wittgenstein to bring us back to the world in which we live.

ENDNOTES
i. Frege 2000 (104)
ii. Frege 2003 (163)
iii. Frege 2000 (104)
iv. Frege 2000 (111)
v. Frege 2000 (105)
vi. Husserl (57-59)
vii. Frege 2000 (104)
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