

Phenomenological Objects & Meaning: A Fregean & Husserlian Discussion

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Abstract

Gottlob Frege and Edmund Husserl are two seemingly different philosophers in their methodology. Both have significantly influenced Western philosophy in that their contributions established fields within philosophy that are of intensive study today. Still, their differences in methodology have, in certain instances, yielded similar or distinct results. Their results ranged from the distinction of sense and reference, objectivity, and the theory of mathematics: specifically, their definition of number. Frege and Husserl have such striking similarities in their theory of sense and reference and related notions that from their apparent correspondence, Frege seems to have acknowledged the coincidences in their theories (Frege & Kluge, 1972) (Hill & Rosado Haddock Intro, 4, & 30-33). That is not to say there are exact parallels between Frege and Husserl and their results, as I will acknowledge their similarities and differences within scale. So, I intend to demonstrate their respective theories and results descriptively to show their likenesses while still recognizing their divergences in scope and methodology. Indirectly, I would also hope to illustrate the ties, in terms of subject matter, of these two philosophers who are historically considered at odds with one another; be it personally, in their schools of philosophy, or methodologically (Hartimo 47-53).

Keywords: Intentionality, Identity, Multitude, Object, Number, Sense

Frege's & Husserl's Theory of Sense & Reference

Frege's Sense & Reference:

Given that the terms or proper names 'a' and 'b' refer to a singular object, the statement 'a = b' will be true. However, a statement as such is very different from a statement of identity like 'a = a'. The difference resides in their cognitive value. A statement of identity, 'a = a', is, at face value, a priori, while a statement like 'a = b' may provide additions to our knowledge that cannot be known a priori. So, 'a = b' is a statement that is a posteriori. What Frege is concerned about here is not so much the physical signs themselves but the sense, or mode of presentation, of such signs, which leads to a difference in what is being designated by such signs (Frege, *Sense & Reference*).

Along with Frege's theory of compositionality of sentences, the reference of a sentence is determined by its constituent parts; he also distinguishes that of its conceptual, logical component (Hill & Rosado Haddock 53-58). Concepts are, for Frege, functions of an argument with the value of truth or falsity. The essence of such functions is in the form of ' $P(_)$ '. Such signs, when unsaturated, refer to themselves. When such signs are extended with an argument sign, it obtains a reference and is saturated. So, when a sign of the form ' $P(_)$ ' is filled, saturated, with an argument sign, a term, with an object as a referent, we obtain a truth value, which is the value of such a function and the concept for such an argument (Hill & Rosado Haddock 26-33 & 53-58). So, we also find, for Frege, that the object being referred to is a truth value. For instance, a concept is true if the argument falls under the concept and false if it does not (*On Concept and Object*) (Kim, 2019).

Naturally, what follows from Frege's theory of sense and compositionality is that of substitutivity. In sum, Frege's substitutivity may be conceived as a condition that in every judgement to substitute, without the loss of truth, a term or phrase with another due to their identity

in reference. From this notion, Frege derives a specific definition of identity that is Leibnizian in structure. For identity to be utilized, it is to be taken as already known for arriving at what is considered identical. So, identity is observed when things are the same when one could be substituted for one another without any loss of truth (Hill & Rosado Haddock 5-8). We find that Frege considers that the laws of identity are thus contained in a universal substitutivity. In a sense, Frege is dissolving the differences between identity and equality. For Frege, to be the same in any one way is equivalent to being the same in all ways regarding their extensionality.

Frege has another related notion to sense which is called conceptual content. Frege takes equipollency or equiderivability as a condition for sameness of thought. Some Frege scholars have considered the notion of conceptual content as being a second notion of sense. Frege characterizes conceptual content in a three-fold manner. (1) Any sentence in the active mood transformed into the passive mood has the same conceptual content. (2) Any two sentences with the same syntactical consequences, ' P syntactically entails Q ' and ' P^* syntactically entails Q ', have the same conceptual content. (3) For any given conceptual notation, ' $P(_)$ ', it need not differentiate between sentences with the same conceptual content: the relevancy lies in the content *for* the notation (Hill & Rosado Haddock 214-215).

Husserl's Intentionality:

Husserl arrives at the notion of sense parallel to that of Fregean sense by his theory of intentionality. Husserl views the notion of intentionality as a fundamental characteristic of consciousness and important for our understanding of the world. Intentionality is a relational concept of a conscious subject and an object(s) in question. However, Husserl's approach to intentionality as phenomenological is an attempt to *explain* intentionality under the guise of the contents of a subject's intentional experiences concerning its object(s). Husserl's notion of content

is distinguished into two components: the noesis and noema of an act. The noesis of an act is the interpretive part of an act, but the noema of an act is more of the sense perceptual part of an object. Husserl conceives of every intentional act as noetic in that it is senseful given an object. For a noema to be fully grasped, a judgement of an object must be made concretely. Such objects are judged in what they are intended to in a mental process. Husserl refers to this as the characterization in the mode of givenness. This whole that is formed constructs the noematic correlate, the sense, of the process of judgement. So, the treatment of the "matter" of an act is a component of the noesis of an act. Thereby, the noesis of an act is characterized as its *sensegiving* portion of an act. This aspect gives an act its directedness towards an object and how such an object is represented (*Ideas I* §128-133).

Husserl is able to distinguish how content is given in a two-fold manner: its authentic manner and its inauthentic or symbolic manner (Miller 34-41). The authentic manner is defined as concepts as they are in representation, while the symbolic manner is mediated through signs: a symbolic representation. For Husserl, a sign is a broad notion in that it isn't restricted to sensuous signs, which are immediate in recognition. Proper names, names of what Husserl calls 'abstracta,' general names, and conceptual marks are examples of signs. The concept of a sign is a relational concept such that it is used to refer to something designated. Here we get a conceptual sign, a mark, which is an external or internal property functioning as a sign.

Husserl makes five subcategories of signs and conceptual signs that further expound their relational properties (Husserl, *SEMIOTIC* 20-25). (1) Extrinsic signs are signs that have nothing to do with the concept designated, i.e., its content; namely, it designates, but its relationship is arbitrary. (2) Univocal and Multivocal signs are signs that designate a unitary object or concept or multiple objects or concepts. It is de facto that any referring sign is univocal, but it may be multivocal depending on its usage. (3) Simple and composite signs and (4) direct and indirect signs

overlap subcategories. A simple sign may be thought of as an atomic sign that designates an object(s). Composite signs can be thought of as molecular signs. A direct sign is a sign that is unmediated by another sign, while an indirect sign is. For instance, multivocal signs are indirect since their connotation can only occur by a mark that mediates the sign and its designatum. Indirect signs are composite signs since such signs are layered upon one another. (5) Identical and non-identical signs or equivalent and non-equivalent signs are particularly interesting. Two signs are identical if they denote the same object or share the same extension: such signs are nonidentical if they do not. Two signs are equivalent if they denote the same object or share the same extension differently. This may occur by differing conceptual or external methods. For example, Husserl observes that synonymous names or signs like King and rex, Wilhelm II, and a German Emperor, $2+3$ and $7-2$, have the same referent but arrive at their referent in different ways (Husserl, *SEMIOTIC* 20-25).

Similarities of the two theories of meaning:

When you consider the theories of reference provided by Husserl and Frege side-by-side, they are essentially the same in several aspects, but not in all. Both theories hold that meaning and referent are distinct. The two theories hold that the sense of the reference determines an expression's reference. Also, each meaning determines at most one referent since the referent of an expressionable term or phrase is a function of its sense. Additionally, different senses may have the same referent, so expressions with differing senses may refer to the same object (Smith & McIntyre 176-177). We also find that an expression is meaningful if and only if such an expression has a referring sense. We may also say that both Frege and Husserl recognize the distinction between L-equivalent and equivalent designators. Equivalent designators are equivalent if and only if they have the same extension; L-equivalent designators are l-equivalent just in case they have the same intension (Carnap, *Meaning and Necessity*) (Hill & Rosado Haddock 33).

Schematically, we may describe Frege's and Husserl's theories as the following: We have a conceptual word that corresponds to the sense of such a conceptual word. The sense of the conceptual word corresponds to the reference of the conceptual words. The last portion of this schema is where there is some contention, namely, the object that falls under the concept. Frege holds that conceptual words have a reference even regardless of the fact that the extension of the concept is empty. Husserl seems to combine this aspect of the reference of a universal or conceptual word in that it is a variable extension that shifts from one context to another. A given fixed concept determines this (Hill & Rosado Haddock 30-38).

Husserl's & Frege's Object Directedness

Frege's Objective:

The main object under consideration for Frege is number. Objective determinateness is a key notion in understanding Frege's outlook on mathematics. Objective determinateness is based on the fundamental laws or axioms of logic. Moreover, in objective determinateness, there is a treatment of numbers as logical objects. These logical objects are numbers that are interpreted in arithmetic sentences conceptually through logical reductions. Hence, arithmetic sentences receive their objectivity through a Fregean logical treatment. A consequence of arithmetic sentences being treated as logical objects is that every statement that expresses an arithmetic sentence is either objectively true or false. In these instances, arithmetic sentences utilize concepts in a specific manner. That is, Frege considers their bijective relation, which is vital in understanding arithmetic sentences.

Husserl's intentional object:

Although Husserl's object-directedness is not confined to the logical or mathematical in the same way as Frege, Husserl still objectifies things under his own guise through his notion of

bracketing. Through Husserl's theory of intentionality, we find that a subject's orientation is directed toward an object. Any intentional act attempts to refer to an object. Whether this object exists or not, an intentional object is distinct from an intentional act. The objective content, as earlier mentioned, i.e., an act noesis or noema, is what the act refers to; in this case, it is an object. This leads me to discuss Husserl's phenomenological abstention, which leads to a reduction.

Phenomenological abstention consists of a subject taking in a given experience and reducing it (Smith & McIntyre 92-97) (Marias 407-412). A given perception is indubitable for Husserl because it is given as is. Such a perception of an object is an assumption of its possible existence and the belief of it that complements it. This belief buttresses an experience to make it indubitable: as in, a characteristic of a subject's experience is that the subject is asserting a belief in the existence or possibility of the existence of an object. Such a process is called a reduction. Phenomenological reduction places the subject in submission to such a reduction of experience, an existential submission or position. So, what is left is the ego, the subject in its pure form, and the rays of experience. Here, Husserl is turning away from objects in themselves towards the inner contents in such a manner that the acts attain their intentionality. This relationship may be characterized as: for any given act, what is its phenomenological structure such that it is an intentional experience directed to a given object. The intermediary satisfying this relationship is content: the content of an act of a particular object.

The intentionality of an act is its property, quality, being shown in a particular manner and, in such a manner, presenting a particular object. The noema, content, or *Sinn*, mediates this relationship that directs to an object. We may define this relationship as follows: an act is intentionally directed to an object if and only if the act entertains, via its noesis, a noematic *Sinn* that prescribes to a given object. Entertains means that a subject does not require explicit awareness of a *Sinn* (Smith & McIntyre 141-144). Prescribes here means that the *Sinn* of an act prescribes an

object as containing certain properties that are experienced by a subject (Smith & McIntyre 200). These properties are prescribed in the *Sinn* by predicate senses. So, the *Sinn* considers not only a subject's sense of properties but also the object that contains these properties, which relate to one another. Predicate senses make up the content of the *Sinn*. Every act by a subject must be able to provide a noematic description of this objective as is intended. This is done through explication and conceptual attainment to grasp a complete aggregate of predicates. These predicates *determine* the content of the object nucleus of a given noema. In this context, we may now define *Sinn* as an object in the manner of its determinations (Smith & McIntyre 197-198).

What of Frege's and Husserl's Object?:

We can see a strong consideration of the object in either Frege's or Husserl's theories. However, Frege is slightly more myopic in his object being that of numbers and their logical construction to satisfy their objectuality. Though he has different goals, Husserl focuses on the object through his phenomenological abstention. Such a theory is much broader since any object can be considered. However, objects, for Husserl, present themselves in a multitude of ways to a subject. This is so because Husserl's theory of intentionality is an object-directed theory through the conditions an intentional act has in relation to an object by the mediation of content, noematic *Sinne*. No matter the scope of Frege or Husserl, they are still rather reductive concerning their approach: I will expound on this in the following section. Husserl takes his phenomenological approach to describe and expound on a given object in relation to a subject.

Though unconcerned with a subject, Frege endeavors to do the same by logical axioms and laws.

On Meaning and Object Directedness Relating to their Theory of Numbers

Frege's Number:

Frege's definition of number is closely tied to or even a result of his theory of sense, as some consider, and his attempt to construct numbers logically (Reck, 2005). Frege's definition is reliant on a number's connection of concepts with numerical statements, extensions of concepts, the one-to-one equinumerous mappability of concepts, and the view that numerical words/numerical expressions are to be treated as object names, which can be thought of as names for the extensions of such concepts (Sierra, 2021). Let us define number under a Fregean outlook:

the number which belongs to the concept F is the extension of the concept 'equal to the concept F' (Frege, FA §68).

This definition expresses the identity of an equation between the valuations and the generalizability for all arguments of such an identity between the valuations of the relevant functions. I preferably understood this definition as an identity function between two statements or concepts bijectively: more informally, two matching collections (Sierra, 2021). Moreover, these concepts or statements are logically constructed to attain their objectuality: with their extensions being logical objects (Reck, 2005).

Symbolically, Frege's definition is expressed as follows:

$$\{x' \mid P x'\} = \{x \mid Q x\} \equiv \forall x \{ P x \equiv Q x \}$$

All that is needed in such an equation to be true is that either side of the principal *identity* sign has the same truth valuation. Considering Frege's theory of sense, his construction stipulates that for this statement to be true, the reference of object names must be the same. So, what it seems that we are observing in such a definition is that of a difference in conceptual notation while having the same conceptual content (Hill & Rosado Haddock 59).

Husserl's Number:

Husserl's response to the problem of number is based on his theory of intentionality and how number is presented in a given domain while getting at a number's *origin*. Husserl mentions that to attain insight into the essence of a concept like that of number, we would have to approach it phenomenologically. Husserl intends to explicate what it is that we mean by number. A definition provided through a phenomenological method will at least foster an understanding of what number is, generally speaking. Husserl is at apparent odds with Frege's and a Euclidean definition of number, that of multitudes. However, Husserl does find some significance in each of the definitions he is at odds with. For Husserl, numbers are defined as *determinate* or definite *multitudes* or multiplicity depending on translation (Miller 33). Husserl wants a definition striding between a philosophical and a mathematical function. Such a definition of number should help us understand what we mean by number. This is an attempt to make sense of number and its origin in the world.

What is meant by the term 'origin' is that of an inquiry of the causes that lead a subject to form such concepts (Miller 35)? Husserl has certain features to note in using the word 'origin.' Husserl, at times, uses the term to talk about the general process of abstraction from which we move away from concrete objects to that of general concepts, the categorical. Under this portrayal of origin, the origin of a *concept* involves two stages. (1) That of a description of the classes of concrete objects, and (2) that of a description of the processes in which the abstraction occurs from such concrete objects. So, there are tinges of empirical notions of origin in the treatment of objects, but also that of phenomenologically constituted objects of those concrete objects: concrete phenomena. It is in this latter treatment of origin that Husserl considers as the basis for our abstraction of the concept of number. So, numbers are categorical objects. They are provided intuitively through the act of categorical activities (*LI* § 40-48). In a phenomenological study of numbers, Husserl wants to bring forth the relational intentional acts that direct us to number. In such a manner, Husserl finds the sort of relations needed to direct us to number to attain their

determinateness, authentic counting. Authentic counting does not involve a mechanical, rote form of counting. Rather, the conceptual content of the number terms we use is motivated, which means that the names for numbers are proactively thought of proactively (Miller 36-37). Such words are not just labels for items of a given group; they are genuine names for Husserl. Here, we find the determinateness of number; that is, number as distinct from just multitude.

Let us elucidate the procedure involved in observing a determinate multitude. Numbers are abstract concepts that occur abstractly from the concept of a multitude. To arrive at such a concept, we must form a general concept of multitude out of concrete multitude via abstraction.

Husserl provides an example of this as, "any something and any something and any something, etc.; or any one and any one and any one, etc.; or more briefly, one and one and one, etc." This abstraction puts a subject in a position to rid of any indeterminateness by simply removing 'etc.' in such a concept. Ridding of indeterminate values, 'etc.,' presents a subject the concept of a determinate multitude or number, for Husserl (*Philosophie Der Arithmetik* 334-335).

What of their number?:

Frege and Husserl have differing yet similar descriptions regarding their respective treatment of number. Frege's approach to number is through the logical construction to attain an object out of number. Husserl considers first his phenomenological method to arrive at number with abstract intuitive notions so that numbers may become objects. So, in a sense, both figures objectify numbers and are reductionists of number. Frege arrives at treating number as an object name with his definition of number similar to that of names for extensions of concepts. While Husserl intends to drive at a subjectively constructed concept of number, that is, categorical objectualities that are of the mathematical in nature based on intuition (*LI* § 40-48). We may also see that Frege's and Husserl's impetus for the arrival of an object of numbers greatly differs. Frege

wants to dispel the subjective to emphasize what is objectively definite, being logical objects. Husserl does not dispel the subjective or subject; rather, he sees the subject as a component to arrive at number. This is the case since, without a subject, there is no intuition. The subject is the one in categorical abstraction. Moreover, Frege's logicism is not something Husserl is in slight opposition to. With Frege's definition of number, we see that there is an attempt to define the concepts of mathematics in terms of logic, and mathematical theorems should be derivable from logical axioms properly. Husserl doesn't entirely agree with this sentiment. Husserl views logic and mathematics as closely related (Hill & Rosado Haddock 202-205). He seemed to consider mathematics as an ontological correlate of logic: a sister relationship. Frege places logic and its axioms as the big sister, or even mother, discipline of mathematics (Hill & Rosado Haddock 202-205). Husserl has this view of logic and mathematics due to his view of what analyticity means. For Husserl, an analytic statement is not just true, but would retain its truth value even after that statement is formalized (Hill & Rosado Haddock 202-205). Frege considers a statement to be analytic as those that are derivable from logical axioms. So, Husserl considers logic and mathematics as parallel to one another, both being analytic and based on notions of meaning and objecthood that serve as the building blocks of mathematics and logic. In some instances, Husserl treats mathematical theories as ontological correlates of logical theories. Compared to Frege, Husserl is in opposition to any sort of logical reduction; instead, Husserl takes mathematics to be based on a plurality of formal-ontological relationships (Hill & Rosado Haddock 204).

Concluding Thoughts

I have striven to demonstrate the theories and results of Frege and Husserl to elucidate their potential similarities and where they differ through description. I also do not attempt to claim that one particular method is more effective than another. Rather, the ideas held by either of them will remain in discussion. Another indirect result I hope to show here is to raise the issue of integrating

different schools of thought and methodology without the concern of labels like 'phenomenology,' 'analytic,' etc. My attempt is only a portion of a historical picture. There are still considerations to take note of between Frege and Husserl. That is, we should consider the possibility of the common origins of phenomenology and analytic philosophy. Moreover, we should also take an interest in the historical influence of Husserl on the current practice and development of mathematics. Husserl's pluralistic, in terms of his forms of possible structures, approach to mathematics have instantiations in many subfields in mathematics such as category theory, topology, abstract or universal algebra, etc. (Hill & Rosado Haddock 280-281) (Hartimo 158-163, 170-174). Contrary to Frege's logical reductionist attempt, that might now be seen as just an attempt in the period of the history of mathematics and philosophy (Hartimo 52-53). Regardless, both approaches have value, elegance, and beauty, which any thinker of such fields will find admirable.

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