

Husserl Intentionality and Cognitive Science

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in collaboration with
Harrison Hall

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Introduction

It often takes several generations—sometimes even centuries—before an original philosopher is sufficiently understood that the work of critical interpretation can begin. Thus, we have barely begun to put Frege, Wittgenstein, Merleau-Ponty, and Heidegger into proper perspective for evaluation. Husserl, however, is in much worse shape. His students and followers have tirelessly been producing books, articles, and anthologies appraising every aspect of his philosophy, as if the job of appropriating his central insight and taking over his technical terminology had already been accomplished. Yet Husserl felt that none of his students, from the most loyal to the most critical,^{1*} had understood the nature and significance of what he considered his most important discovery: the special realm of entities revealed by the transcendental phenomenological reduction. And although the misunderstandings are largely his fault, Husserl was, regrettably, right. The reduction has been performed and pronounced unperformable, and existence has been bracketed and declared unbracketable, by an army of Husserl exegetes, all without a clear explanation in non-Husserlian terms of what the reduction is, what it reveals, and why according to Husserl one must perform it in order to do philosophy.

It took an analytic philosopher and logician, Dagfinn Føllesdal,

*Notes which contain something more than, or other than, textual citations have been marked with an asterisk throughout the volume.

influenced by the study of Frege, to see what Husserl considered to be his greatest achievement: a general theory of the contents of intentional states which accounted for the directedness of all mental activity. As Føllesdal explains more fully in the papers included in this volume, the phenomenological reduction is Husserl's way of describing the turning of attention away from both objects in the world and psychological activity to the mental contents which make possible the reference of each type of mental state to each type of object.

In his most fully worked-out account of intentionality, Husserl called the abstract structure by virtue of which the mind is directed towards objects a *noema*. Following Føllesdal, a new generation of Husserl interpreters has been working out what the noema is and what view of mind and reference it implies. Thanks to this work, Husserl has finally begun to be recognized as the precursor of current interest in intentionality—the first to have a general theory of the role of mental representations in the philosophy of language and mind. As the first thinker to put directedness of mental representations at the center of his philosophy, he is also beginning to emerge as the father of current research in cognitive psychology and artificial intelligence.

The purpose of this anthology is to make the papers of these new Husserl interpreters available to analytic philosophers, cognitive scientists, and all who want to understand the central notions of phenomenology. Once Husserl's account of the pervasiveness of intentionality has been grasped, along with the complexity of the representational content which makes intentionality possible, Husserl interpreters will, we hope, carry through the tasks of reexamining Husserl's work on logic, language, psychology, other minds, history, and the social sciences. We would have liked to include papers showing the relevance of Husserl's analysis of intentionality in each of these areas, but the approach to Husserl put forth here is new and its availability has thus far been restricted to scattered journal articles, so that many of the specific areas in which he applied his basic insight remain to be effectively explored.

Once we have a fuller picture of the scope and plausibility of Husserl's "strict science," we will be able to appreciate his growing sense of the difficulties of his approach. We will then be in a better position to evaluate the insights of investigators like Martin Heidegger and Maurice Merleau-Ponty, who developed their views in opposition to Husserl's insistence on the philosophical priority of

1

Brentano and Husserl on Intentional Objects and Perception

Dagfinn Føllesdal

In order to shed some light upon the relationship between Brentano and Husserl, I shall discuss briefly their views on intentional objects and on perception. I have chosen to focus my comments on these two themes partly because the themes were central to their relationship and partly because they are also interconnected in a certain way that we shall look at. I will begin by saying a little about Brentano's view on intentionality and some of the problems associated with it. I will then explain how Husserl tried to solve these problems. Afterwards I will go on to discuss some features of Brentano's view of perception, and I will finally show how Husserl here too starts out from Brentano, but modifies Brentano's ideas in such a way as to create a quite different theory.

Let us first consider intentionality. Brentano, as you know, held that intentionality is characterized by a certain kind of directedness. We encounter problems when we try to characterize it, and you will remember that in his early writings Brentano simply said that the directedness is characterized by there being some object which is always there, which the act is directed toward. Brentano's phrase is that the object "intentionally inexists" in our act. This immediately gave rise to various misunderstandings. The problems came up because if one tries to clarify this notion—and his students

certainly did not find it quite clear—one seems immediately to be faced with a dilemma: on the one hand one might try to emphasize the fact that there is always some object there, and then the problem is that if this is going to be the case, that object has to be a rather watered down kind of object. It is something that in a certain way exists only in our consciousness. This also was suggested by the phrase “intentional inexistence,” and this led to various interpretations of Brentano that he himself later found necessary to guard himself against. There are several letters from Brentano to various of his students in which he complains bitterly that people have taken him to hold that the intentional object is some kind of object in our mind. Brentano wants to make clear that this is an untenable position, and he has various arguments to show that it is untenable. One argument consists in pointing out various differences between the real physical object and the object of thought. These are two different things, and in fact Brentano is not the first one who has emphasized their difference. We find the same observation made, for example, by Frege, and before him by Bolzano. One might, for example, hold that when a person is thinking about Pegasus, then really what he is thinking about is just his idea of Pegasus. Frege rejected this, saying that if that were the case then clearly with the same ground we could say that when somebody is thinking about the moon, what he is really thinking about is just his idea of the moon. And clearly an idea of the moon is quite a different thing from the moon itself.¹ Brentano makes pretty much the same point arguing against the view that the intentional object is something in our mind. Another of his remarks is that “it is paradoxical in the highest degree to say that what a man promises to marry is an *ens rationis* and that he keeps his word by marrying a real person.”² There has to be some connection between the object to whom you give the promise, and the person whom you later marry. These are examples of the kind of difficulties that Brentano finds in that view. For that reason he rejects the attempt to save the theory of intentionality by saying that the object should be part of our own consciousness.

Brentano then goes on to insist that the object is a real full-fledged physical object. But of course that gives rise to other difficulties.

Brentano was aware of them, and so were his students. One very simple and straightforward way out is to do what Meinong did, viz. to hold that the object is a real full-fledged physical object, but that in cases where there is no such thing, the object has the

property of nonexistence. The difficulties involved in treating existence as a predicate and in holding that some objects do not exist are well known, and one might wonder whether Brentano ever held such a view. Clearly there are passages in Brentano where he says in so many words that in some cases the object of our act does not exist. One might claim that he never intended this very seriously, but he clearly says it. Another problem is that he also uses pronouns all the time to talk about it and he also even uses demonstratives, saying that *this* object does exist. So, he says things like this. On the other hand it is quite clear that he is not very happy with it, because he also says: "I admit that I am unable to make any sense at all out of this distinction between being and existence."³ There are people, he says, who make it, and it is clear that Meinong is one of the people he has in mind, and Meinong's students. Not being able to make any sense of such a distinction, Brentano returns again and again to the problem of the status of the intentional object. He tries repeatedly to clarify what is meant, and it is quite clear what side he is on: he insists that the object of the act is a full-fledged physical object, not something in our mind.

One proposal hinted at in some of the texts is for a translation theory. Brentano suggests that when we say that a mental reference refers to an object, we speak improperly. We speak that way just for convenience, and what we say should be regarded only as convenient shorthand for something else, more clumsy and inconvenient, which does not involve reference to anything nonexistent.

In Brentano's own words: "for every sentence which seems to have one of the things mentioned as its subject or predicate, (one) can form an equivalent in which subject and predicate are re-established as real entities."⁴ Brentano gives credit to Leibniz for this idea of what Brentano calls "a translation," an idea which "removes a host of subtle and abstruse debates which have perplexed metaphysics and logic."⁵ These fictions should not be avoided, he thinks. Thus, for example, they may facilitate logic, by simplifying expression and even thought itself. Likewise, mathematicians use with advantage the fictions of numbers less than zero, and many others.

One weakness of Brentano's proposal is that, unlike Russell when he presented his theory of definite descriptions, Brentano does not give any directions or outlines of how this translation is to be performed. Another even more serious difficulty is that it might seem to jeopardize his whole idea of intentionality as

directedness. What happens to the mental phenomena and their directedness when our talk about them has been thus translated into talk where no intentionally inexistent object is referred to? When we perform such a translation, do we find that our thinking that the mental phenomenon contained an object intentionally in it was fallacious?

And what about the cases in which the object referred to does exist—as, for example, when somebody thinks of the moon? Why should we not also in that case perform the translation and end up saying that the object of this thought is not the moon after all? Brentano does not answer these questions.

The intentional object hence seems to be a problem for Brentano—one that, in my view, he never solved properly, and I think that this is the main reason why so many of his students deviated from him. They all agreed that the notion of intentionality was very important in philosophy, and also that directedness was a main characteristic of intentionality. But Brentano never quite succeeded in clarifying this notion of directedness to their satisfaction. I suspect that Brentano was not satisfied himself and that this, too, was a reason why he turned to it again and again. The contexts where he returns to it are always complaints that his students misunderstood his view. He then tries to make clear what his own view is, but every time he tries, he ends with something which, in my view at least, is not very clear.

One wonders, is there any way of getting around these problems? One way that has been suggested is to say that the directedness in question is not a genuine relation, but a kind of one-place predicate, a property of people. This serves well as far as it goes, but the problem with this approach is that it eliminates a lot that we would like to keep. Another way of handling the problems has been proposed by Richard Arnaud in "Brentanist Relations" in the *Festschrift* for Chisholm.⁶ Arnaud suggests that statements concerning intentional objects should be construed as statements that are indicative of propositional attitudes. When one says that somebody is afraid of something, this should be paraphrased into something to the effect that he is afraid that so and so. Thereby one avoids direct-object constructions in such contexts.

However, this does not seem to me a satisfactory approach. There are several reasons why neither the predicate solution nor the solution by propositional attitudes is satisfactory. One has to do with learnability. That is one of the arguments that Arnaud in

his article uses against the predicate view. However, as long as we do not have a theory of propositional attitudes that explains how the truth values of propositional attitude statements depend upon the constituent parts of these statements, there are related problems about the logical relationships between sentences of this form. These relationships tend to disappear if you treat the whole thing as one monadic predicate, and they are not properly taken care of if you treat the whole thing as propositional attitudes, since we lack a theory of propositional attitudes which interconnects them in the proper way.

There is another problem that I consider far more important—there are certainly cases in which we would like to quantify into contexts of this kind. We may want to say, for example, that there is something which we believe to be so and so, or of which we are afraid. These constructions cannot be handled at all if they are treated as composite monadic predicates or as expressions of propositional attitudes. And it seems to me that we need quantificational phrases of that kind. I do not think all our use of such phrases is due to confusion. We therefore need some way of handling them—that is, we need a way of quantifying into such phrases. We do not get that if we treat them as composite monadic predicates, because there is no place appropriate for quantification there. There seems to be no idea in Brentano that solves this problem for us.

It seems to me that Husserl's way of handling the problem retains the virtue of our being able to quantify into such contexts and produce all the constructions that we would want. The basic difference between Husserl and Brentano is that while Brentano tried all the time to deal with these problems by appealing only to the two notions of the subject and the object, Husserl uses a third, intermediary notion, what he calls the *noema*, which is introduced to account for the directedness of the mental phenomena. While Brentano had tried to characterize directedness by talking about the object towards which the act is directed, Husserl instead characterizes the directedness by the introduction of this entity, the *noema*. This notion is closely parallel to Frege's notion of sense. I do not claim that he got it from Frege, because Husserl also studied several other philosophers who had similar notions, like Bolzano; Bolzano's notion of an objective idea (*Vorstellung an sich*) is quite similar to Frege's notion of sense. However, among the philosophers whom Husserl had read before he developed his own treatment of intentionality, Frege was the one who had

developed the idea of sense most systematically. Frege was also the only one who had used the notion of sense to analyze contexts involving verbs for mental activities, like "believes" etc.

There are many remarks in Bolzano that also point in the direction that Husserl took. Now, of course Brentano also knew Bolzano. We might wonder why Brentano did not make use of Bolzano's ideas in his treatment of intentionality. However, although Brentano esteemed Bolzano very highly, he tells us that he cannot find any particular point where he learned from him. It seems that Brentano had never studied Bolzano's *Wissenschaftslehre* carefully. He had read little by Bolzano apart from his *Paradoxes of the Infinite*. But Husserl, particularly in the 1890s, seriously sat down and worked through the *Wissenschaftslehre*, in addition to studying Frege, and he tells us that he was very impressed by Bolzano's notion of ideas in themselves. Husserl also says that earlier he had not been interested in the *Wissenschaftslehre*, because he had regarded it as a kind of obscure metaphysics, but upon the second reading in the 1890s he discovered that these four volumes contained extremely important philosophical ideas.

By help of a trichotomy between the acting subject, the noema, and the object, Husserl is able to both retain Brentano's idea of the directedness of mental phenomena and overcome the difficulties where there are no corresponding objects. While Brentano kept insisting that the directedness of the act should be accounted for by means of some object toward which the act is directed, and got into all his problems, Husserl's view is that the directedness of the act should be accounted for not by some object toward which the act is directed, but by a certain structure of our consciousness when we are performing an act. This structure Husserl calls the noema.

Now, what is important is that this object which is introduced to account for the directedness of the consciousness is *not* that towards which our consciousness is directed. That is the little point that makes all the difference between Brentano and Husserl. What our consciousness is directed towards will always be a normal, full-fledged object—that is, a physical object or whatever else we are conscious of. In many cases there is no such thing. However, we still have directedness—that is, our consciousness is always *as if* there were an object. The point of the noema is to explain what this "as if" amounts to. That is to say, studying the noema is to study the different features of consciousness to see how they all fit together, so that they seem to be features of one object.

Through this theory Husserl preserves Brentano's (I think very correct) intuition that our acts should be as if directed towards normal full-fledged physical objects. And he is able to preserve this even in cases where there is no such object. So here we have seen one point where Husserl seems to have overcome a problem in Brentano by separating what is in consciousness as a structure of it and what is in the world outside us.

This idea of separating these two things occurs also in Husserl's treatment of perception, as we shall see in a moment. But before we leave the intentional object, I should like to note that by introducing the notion of the noema, Husserl is able to preserve also those features of act-contexts that make it possible to quantify into such contexts. One can work out the logic of this in a proper way without getting into the difficulties that are normally encountered in such intentional contexts. It seems to me that the best way of doing it is by using not the usual modal logics that have been proposed for perception, but the ideas of Alonzo Church, who has worked out systematically Frege's view on sense and reference. Hence it seems to me, if one wants to work out a Husserlian theory of acts, and of perception in particular, the best logical starting point would be Church's logic of sense and denotation.⁷ By treating perception and intentionality in that way, one can salvage quantification into such contexts, and one salvages all the logical interrelations one would want between the different features of the object of our act.

But now to perception. Here also Husserl, especially in his *Ideas*, takes Brentano as a starting point, and then shows why one should modify him. Husserl first discusses the distinction that Brentano makes between mental and physical phenomena.

We have so far talked mainly about the mental phenomena, and we have seen that Husserl retains Brentano's basic idea of the directedness of mental phenomena, but that he modifies it by using a distinction relating to Frege's and Bolzano's distinction between sense and reference. Husserl has no further complaint about the category of mental phenomena. However, he thinks that Brentano went wrong when he discussed physical phenomena. Husserl claims that, in discussing physical phenomena, Brentano has lumped together two things that should be carefully separated. The two things that should be separated are, according to Husserl, what he calls the objective and the material phases of our experience. We shall take a look at this with the help of the following diagram, which I shall explain and comment on as we go.

	HUSSERL	BRENTANO
experiences	{ <ul style="list-style-type: none"> intentional phases of experience = <i>noesis</i> = informing (animating, meaning-bestowing) stratum 	{ <ul style="list-style-type: none"> mental phenomena
	<hr/> { <ul style="list-style-type: none"> material phases of experience = <i>hyle</i> = matter (<i>Stoff</i>) = sense data = primary contents (<i>Logische Untersuchungen</i>) = perspective variations 	
features of objects	{ <ul style="list-style-type: none"> objective phases of experience = perspected variable 	{ <ul style="list-style-type: none"> physical phenomena

Some Distinctions in Husserl's Theory of Perception and How They Compare with Brentano's Distinction between Mental and Physical Phenomena

What are the material and the objective phases of experience that should be separated according to Husserl? Husserl discusses various of Brentano's examples of physical phenomena. Brentano cites as examples colors and sounds. He also unfortunately includes in one place landscape, but that is clearly a slip, and many of Brentano's followers complained that Husserl focused too much on that one example.³ We will leave it out, because it is a slip and because Husserl's criticism is independent of that unfortunate example. While Brentano held that physical phenomena exist *only* intentionally (sharing thereby the view of many philosophers that secondary sense qualities do not exist independently of their being perceived), Husserl held that they exist in the same way that physical objects do. Husserl maintained that in addition to physical objects and shapes and so on, there are also colors and sounds in the

external world. Like all objects in the external world, these objects can be experienced from different perspectives. An example he gives is the sound of an orchestra playing in a concert hall. That sound is experienced differently depending on where you are sitting in the hall or, if you are late, whether you are standing outside and hear it through closed doors. It is the same sound, but it sounds different. The objective phases of experience for Husserl are therefore shapes, sounds, colors, and so on. In the case of shapes, it is easy to follow him. We all know from epistemology the example of a round table top. The shape is round but appears different, depending on where we are located relative to the top. Now Husserl claims that the same thing holds for sounds and colors and so on.

The example of colors may seem a little strange, but Husserl insists that while an object may be of a certain color, this color may appear differently, depending, e.g., on light conditions, on what kind of glasses we wear, and so on. In spite of these variations there is an objective color (which might of course change from time to time) and there are different ways of experiencing that color. Other phrases that Husserl uses to distinguish the color from our experience of it is the "perspected variable" of the color and the "perspective variations" of our experience.

Now we come to the material phases of our experience. These phases are, Husserl says, experiences that we undergo when our sensory organs are affected. When we see some object, or see the shape of it or the color, we are affected in certain ways, and the experiences that we undergo are what he calls material phases of our experience. Another word he uses for this is *hyle*. He simply takes over the Aristotelian word for matter and says that the *hyle* are not objects that we perceive, or features of such objects—for example, colors. The *hyle* are experiences that we undergo when we see these objects, their colors, their shapes, etc. So again he has a distinction between what is the object of our act, and what goes on in us. The material phases are things that go on in us, they have temporal coordinates—they start at a certain time and end at a certain time. But these temporal coordinates need not coincide with the temporal coordinates of the objective phase of which they are experiences. The color may remain there long after we have stopped observing it, so that the temporal features of the color are different from those of the *hyle* we have. I will not go into this, but in Husserl's lectures on internal time-consciousness, he has additional criticisms of Brentano, because he finds the

distinction between mental and physical phenomena in Brentano not adequate to account for the fact that we can experience something that lasts through a long period of time, so that the object that we experience has this long duration, although our experience of it has only a short duration. Now, one unfortunate thing in Husserl is that he uses the phrase "sense data" (in German *Empfindungsdaten*) for the hyle. This, I think, has caused a good deal of misinterpretation. Sense data, in most theories, are things that we see or hear, but for Husserl they are not, they are merely experiences, and we do not see them. This is, of course, a very odd use of sense data, but I think it is a much better notion to use in epistemology than the traditional notion of sense data. That Husserl used "sense datum" for what he had in mind indicates that he was very poor at reading other philosophers and adapting his own terminology and exposition to the current terminology of his time. The price he had to pay was that he was very often misunderstood.

So, what happens when we experience and perceive, according to Husserl, is that there is some object that impinges causally upon our sensory organs. We then have some hyle. These hyle are animated by what Husserl calls a meaning-bestowing stratum. This stratum he calls the *noesis*. The *noesis*, then, informs the hyle so as to give us an act that is directed towards the appropriate object. We could make these notions clearer by taking first a case of imagining. If you just imagine things, you can have pretty much whatever *noesis* you want. However, when you perceive things, the hyle you have will serve as boundary conditions, and they will eliminate the possibility of lots of *noeses*. The hyle do not shrink the possibilities to one; there are still different possibilities. However, the function of the hyle is to eliminate certain possibilities. At any one time you will have one particular *noesis*. As your experience goes forward and you get more hyle, those hyle you get do perhaps not fit the *noesis* you had originally. You will then say that you misperceived, and you will take on some other *noesis* compatible with both the hyle you had originally and the later hyle that forced you to give up the original *noesis*.

I said very briefly that the hyle are brought about when the physical object irritates our sensory organs. Husserl does not say much about the hyle. But it seems to me that the so-called causal theory of perception could be accommodated very well to Husserl's view of perception. It would be a restriction on the way in which you can structure the world that you experience, viz. the restriction that whatever object you perceive has to be placed in

such a position in the world that it causally affects your sensory organs. However, there is no necessity to interpret Husserl this way. He has really not gone into the problem, and I point out that it would be compatible with his view to have a causal theory of perception. Maybe he would have done it quite differently himself.

It seems to me that Husserl has found a rather interesting way of handling perception. It is remarkable that Husserl compared our sensory experiences to Aristotelian matter, which was not some object perceived, according to Aristotle, but nevertheless plays a role in our perception, while Brentano, although he was an expert on Aristotle, never got the idea of comparing the physical phenomena to matter. I think there are good reasons for this, since Brentano lumped so many different things together and called them physical phenomena that he would not be likely to compare all of them to Aristotelian matter. Having divided Brentano's physical phenomena into two groups, Husserl found that one of these groups came close to the Aristotelian notion of matter and could appropriately be called hyle. Husserl therefore propounds a kind of hylomorphism. What corresponds to Aristotle's "form" or *morphe*, could, in a first approximation, be called the noesis, which informs the hyle. However, the noema that I talked about at the beginning of this paper is an even better counterpart to the form; the noesis is simply the temporal counterpart to the abstract noema. Hence, to sum up, the noema should be compared to the form, the noesis to the informing part of the consciousness, and the hyle to the boundary conditions which limit the range of noemata that we can have in a given case of perception. Neither the noema nor the noesis (nor the hyle) are objects of the acts whose noema, noesis, or hyle they are. However, they are the features through whose interplay our consciousness has the directedness towards objects, the intentionality, that Brentano claimed it to have.

2

Husserl and Frege: A New Look at Their Relationship

J. N. Mohanty

Husserl's explicit rejection of psychologism as a theory of the origin of the logico-mathematical entities and his advocacy of a conception of pure logic as a science of objective meanings were first expounded in the *Prolegomena to Pure Logic* (1900), and Husserl tells us that the *Prolegomena*, in its essentials, is a reworking of lectures he had given at Halle in the year 1896.¹ Føllesdal, in his careful study of the relation between Frege and Husserl during these years, asks the question, at what time between 1890 (the year of publication of the *Philosophie der Arithmetik*) and 1896 did this change in Husserl's mode of thinking take place?² The papers published during 1891-1893 do not, according to Føllesdal, bear testimony to any such change. In the paper, "Psychologische Studien zur Elementaren Logik" of the year 1894, Husserl still believes that the foundations of logic can be clarified with the help of psychology. Accordingly, the change must have occurred between the years 1894 and 1896. Frege's famed review of the *Philosophie der Arithmetik* appeared in 1894. Føllesdal therefore conjectures that it is Frege's review which must have led Husserl to a complete revision of his prior mode of thinking.³ This view of the Frege-Husserl relationship is shared by many writers. A recent writer even speaks of Husserl's "traumatic encounter with Frege."⁴

In this paper I wish to argue that the basic change in Husserl's mode of thinking which by itself could have led to the *Prolegomena* conception of pure logic had taken place by 1891. This change may be discerned in Husserl's review of Schröder's *Vorlesungen über die Algebra der Logik*.⁵ It also underlies the program of *Inhaltslogik* worked out in "Der Folgerungskalkül und die Inhaltslogik" of the same year.⁶ If pure logic is defined in the *Prolegomena* in terms of the concept of ideal objective meanings,⁷ then the 1891 review of Schröder's work contains this concept. If the major burden of Frege's 1894 review of the *Philosophie der Arithmetik* is the lack of distinction, in that work, between the subjective and the objective,^{8*} between *Vorstellung* and *Begriff* and between both and the object, then Husserl had already come to distinguish between *Vorstellung* as meaning and as object in his 1891 review. If this be so, then another historical judgment—connected with the above—needs to be revised. It has been held by many authors that Husserl's distinction, in the *Logische Untersuchungen*, between meaning and object of an expression originates with Frege. Thus, for example, Hubert Dreyfus writes: "Husserl simply accepted and applied Frege's distinctions . . . The only change Husserl made in Frege's analysis was terminological."^{9*} Now, if Husserl's review of Schröder already contains that distinction, then it surely antedates the publication of Frege's celebrated paper "Über Sinn und Bedeutung" of 1892, and Husserl must have arrived at it independently of Frege.

Referring to Schröder's distinction between univocal and equivocal names, Husserl writes:

. . . he lacks the true concept of the meaning of a name. That requirement of univocity is also expressed in the form: "The name shall be of a . . . constant meaning." (48) However, according to the relevant discussions on pages 47–48, the author identifies the meaning of the name with the representation (*Vorstellung*) of the object named by the name, from which the striking consequence follows, to be sure, that all common names are equivocal. It is not as if the author had overlooked the distinction between equivocal and common names—and besides, who could overlook it! But to see a distinction and to apprehend its essence are two different things. Moreover, he uses the term "meaning" (*Bedeutung*) itself equivocally, and that in an already intolerable degree. In the above quotation, in spite of mutually opposed and false explanations, what is intended is the ordinary sense. On another occasion, however, what is actually meant is the object named by the name; how otherwise, e.g., could, in verbal contradiction with the above mentioned requirement, the common names be as such

characterized as being such that "several meanings are true of them with the same right and justification!" (69) And even that is not enough; the class corresponding to the common name is also called its meaning (69fn.). It is therefore understandable that the author is not able to formulate the essence of equivocation precisely . . . It is further connected with unclarity in the concept of meaning that Schröder regards names such as "round square" as meaningless (*unsinnige*) and sets them apart from univocal and equivocal names. Obviously he confuses here two different questions: (1) whether there belongs to a name a meaning (*ein "Sinn"*); and (2) whether an object corresponding to a name exists.¹⁰

This paragraph clearly shows that Husserl did distinguish, as early as 1891, between:

- (1) the sense or meaning of a term (for which he is using both '*Bedeutung*' and '*Sinn*', though in the *Logische Untersuchungen* he will prefer '*Bedeutung*'),
- (2) the object (*Gegenstand*) which the name may designate in case the object exists,
- (3) the representation (*Vorstellung*) of such an object.

Representations may vary, but the meaning or *Sinn* may remain the same. Furthermore, there may be no object that is designated, and yet a name may have meaning. Even when there are objects that are designated, the multiplicity of objects does not imply multiplicity of meanings. He therefore has a clear distinction between *Vorstellung*, *Gegenstand*, and *Bedeutung* or *Sinn*.

It is true that these remarks do not contain the thesis of the *ideal* objectivity of meanings, but they certainly do not confuse meaning with *Vorstellung* and therefore testify to an awareness of the *objectivity* of meanings as contrasted with the subjectivity of the *Vorstellungen*.

Could Husserl have derived this threefold distinction from any of Frege's earlier writings? If anywhere in Frege's writings before 1891, we are to look for it in *Die Grundlagen der Arithmetik* (1884). But Frege writes in his letter to Husserl of May 24, 1891, that in the *Grundlagen* he had not yet drawn the distinction between meaning and reference.^{11*} It is unlikely, then, that Husserl took it from him. It is more likely that both arrived at the distinction independently, for Husserl writes back to Frege: "I also notice that in spite of essential points of divergence, our points of view have many things in common. Many observations which forced themselves on me, I find had been expressed by you many years

earlier." That seems in principle to be a true account of their relationship at this stage, though it would seem that on this point, i.e. the distinction between meaning and reference, Husserl and Frege must have arrived at it about the same time and independently of each other.

What is of importance for our present purpose, however, is that Husserl's overcoming of subjectivism in favor of an objective theory of meaning and the consequent theory of logic is already foreshadowed in the 1891 review of Schröder's work and three years prior to Frege's review of the *Philosophie der Arithmetik*. The other 1891 paper, i.e. the one on *Inhaltslogik* more clearly brings this out.

II

Amongst the major theses which Husserl puts forward, insofar as his conception of logic at this point is concerned, we may mention the following:

(1) A calculus qua calculus is not a language: "the two concepts are fundamentally different. Language is not a method of systematic-symbolic inference, calculus is not a method of systematic-symbolic expression of psychic phenomena."¹²

(2) A logic qua logic is not a calculus. A calculus is a technique, a *Zeichentechnik*. Logic is concerned not with mere signs but with conceptual contents.¹³

(3) Deductive logic is not the same as a technique of inference, nor is it exhausted by a theory of inference. There are deductive operations other than inferring. A deductive science does not consist merely of inferences. It may involve, e.g., the operation 'computing' (*Rechnen*), which is not inferring.¹⁴

(4) It is not true that only an extensional calculus of classes is possible. A calculus of conceptual contents, or intensions, is also possible.¹⁵

(5) An *autonomous* extensional logic of classes is not possible, for every extensional judgment (*Umfangsurteil*) is, in truth, an intensional judgment (*Inhaltsurteil*). The concept of class presupposes the concepts of 'conceptual content' and 'object of a concept'.¹⁶

(6) Every judgment has two aspects: logical content and 'algorithmic content'.¹⁷ The logical content is the judged content (*Urteilsgehalt*)—i.e., that which it states (*das, was sie behauptet*). Reducing a categorical judgment to a relation of subsumption

among classes brings out its algorithmic content. The two are equivalent but not always identical. They are identical when the judgment is a judgment about classes.

(7) A judgment by itself is directed not toward classes or conceptual contents, but toward objects of concepts (*Begriffsgegenstände*).¹⁸

(8) Geometrical thinking is not operations with signs or figures. The signs are mere 'supports' for the 'conception of the truly intended operations with concepts and with respective objects of those concepts.'¹⁹

Most of these theses are retained, with modifications and shifts in emphasis no doubt, in the *Prolegomena* and the *Investigations*. Pure logic is the science of meanings. "Everything that is logical falls under the two correlated categories of meaning and object."²⁰ Algorithmic methods spare us genuine deductive mental work by "artificially arranged mechanical operations on sensible signs"²¹ and "their sense and justification depend on validating thought."²² Certainly, Husserl has now, in the *Prolegomena*, much more sympathetic understanding of the "mathematicising theories of logic" and he has come to regard the mathematical form of treatment as the only scientific one which offers us "systematic closure and completeness."²³ But he is still cautioning us that "the mathematician is not really the pure theoretician, but only the ingenious technician, the constructor, as it were, who, looking merely to formal interconnections, builds up his theory like a technical work of art."²⁴ But this note of warning is mollified by the assurance that what makes science possible is not essential insight but "scientific instinct and method,"²⁵ and that philosophical investigation should not meddle in the work of the specialist but should seek to "achieve insight in regard to the sense and essence of his achievements as regards method and manner."²⁶ The thesis that extension of a concept presupposes its intension is developed in the Second Investigation, though there is more explicit emphasis on the ideal objectivity of meanings and there is talk of the *Inhalt* as a *species*.

III

Husserl sent copies of his 1891 papers to Frege. We know of this from the correspondence between the two men. It is worthwhile therefore to find out what Frege's responses to the Husserl papers were. In his letter of May 24, 1891, after acknowledging receipt of Husserl's *Philosophie der Arithmetik* and the papers on Schröder

and *Inhaltslogik*, Frege emphasizes that the two have many ideas in common, and renews his decision to write down his own thoughts on Schröder's book.²⁷ He agrees with some of Husserl's criticisms of Schröder, e.g. of Schröder's definitions of '0', '1', 'a+b' and 'a-b'. Referring to the *Philosophie der Arithmetik*, Frege hopes that sometime in the future, time permitting, he may reply to Husserl's criticisms of his own theory of number. He draws attention to one major difference between them, and that concerns how a common name relates to its objects. Frege illustrates his own view with the help of a schema (see below).

Sentence	Proper name	Common name
↓	↓	↓
<i>Sinn</i> of the sentence (<i>Gedanke</i> =Thought)	<i>Sinn</i> of the proper name	<i>Sinn</i> of the common name
↓	↓	↓
<i>Bedeutung</i> of the sen- tence (its truth-value)	<i>Bedeutung</i> of the proper name (<i>Gegenstand</i>)	<i>Bedeutung</i> of the common name (=concept)→ object which falls under the concept

In the case of common names—according to Frege—one step more is needed to reach the object than in the case of proper names. Furthermore, in the case of common names, the concept may be empty—i.e., unless there is an object, the concept ceases to be scientifically useful. In the case of proper names, however, if a name does not name anything—i.e., lacks an object—it is scientifically useless. This refers to Frege's well-known and controversial thesis that concepts constitute the reference, not the *Sinn*, of common names. Frege contrasts with this Husserl's view that the *Sinn*, (or, in Husserl's language, the *Bedeutung*) of a common name is the concept expressed by it and its reference is constituted by the object or objects falling under the concept. The latter makes it clear that Frege does recognize that Husserl made a distinction between *Sinn* and *Gegenstand*, only he does *not* here ascribe to Husserl a distinction between *Vorstellung* and *Sinn*.

Husserl writes back to Frege on July 18, 1891. He admits the great intellectual stimulus he has received from Frege's theories and goes on to express his views about the many points of agreement between them—to which reference has been made earlier. Among these points of agreement, Husserl refers to his own distinction between 'language' (*Sprache*) and 'calculus,' which he

now finds in Frege's 1883 paper "Über den Zweck der Begriffsschrift,"²⁸ where he distinguishes between the concept of "calculus ratiocinator" and the concept of "lingua characteristica." It appears to him that the *Begriffsschrift* is intended to be a lingua characteristica and not a "sign language constructed in imitation of the arithmetical." He concludes the letter by expressing agreement with Frege's rejection of "formal arithmetic" as a *theory* of arithmetic, however important it may be as an extension of the arithmetical technique. Husserl is referring to Frege's "Über formale Theorien der Arithmetik,"²⁹ whose copy Frege had just sent him. The sense of 'formalism' in which Frege rejects it as a theory of arithmetic is that according to which the signs for numbers like '1/2,' '2/3,' 'π' are empty, meaningless signs (*leere Zeichen*.) According to this theory, as Frege understands it, these empty signs themselves are numbers, and they constitute the proper subject matter of arithmetic.³⁰ That Husserl should concur fully with Frege's total rejection of such a theory of arithmetic should be obvious from the foregoing summary of his views. The *Prolegomena* shows much greater understanding of the significance of formalism, but even there his philosophy of arithmetic is not formalistic. His formal logic is the correlate of formal ontology, and in large parts of the work he is concerned not with a specific formal science but with the form of theory in general.

From the above survey of the Frege-Husserl correspondence of 1891,³¹ it becomes clear that Frege did not quite show any recognition of the presence of the *Vorstellung-Sinn* distinction in Husserl's Schröder review. However, as we have already seen, this distinction is there, which suggests that Husserl was already on his way, independently of Frege's 1894 review, toward the objective conception of logic of the *Prolegomena*.

IV

Let us now look at other comments by Frege on the Husserl papers of 1891. We know that in his May 24, 1891, letter to Husserl, Frege writes that Husserl's Schröder review had made him decide to publish his own thoughts on Schröder's book, and that his comments on it may appear in the *Zeitschrift für Philosophie und philosophische Kritik*. However, Frege's "Kritische Beleuchtung einiger Punkte in E. Schröders Vorlesungen über die Algebra der Logik" finally appeared four years afterward in the *Archiv für systematische Philosophie*.³² In this review, Frege, among other

things, brings out the essential points of difference between Schröder's concept of '*Gebiet*' (domain) and the logical concept of class, and points out how Schröder unknowingly oscillates between the two. Insofar as the logical concept of class is concerned, Frege considers it entirely mistaken to take a class as consisting of individual things, as a collection of individuals—a mistake which according to him, derives from Schröder's attempt to extend his *Gebietalkül* to the logic of classes.³³ And yet, asks Frege, how else is a class constituted if one abstracts from common properties? "Only through the fact that the classes are determined by the properties which their individuals should have, only through the fact that one uses expressions such as 'the class of objects which are b,' is it possible to express general thoughts when one states relations amongst classes; only through this does one come to logic."³⁴ Thus Frege agrees with Husserl's comments: the extension of a concept presupposes the intension of the concept. In Frege's own words: "In reality I hold the view that the concept logically precedes its extension, and I consider it a mistake to attempt to found the class, as extension of a concept, not on the concept itself but on the individual things."³⁵ Despite this agreement with Husserl's point of view, however, Frege refuses to side with *Inhaltslogik* against the so-called *Umfangslogik*, and adds: "Nevertheless, I am in many respects possibly closer to the author (i.e. to Schröder) than to those whom one could call, in opposition to him, logicians of content (*Inhalt*)."³⁶ Obviously he has Husserl in mind. The question naturally arises: why does Frege reject the conception of an *Inhaltslogik* even though he does not agree with a purely extensional analysis of classes?

The reasons become partly clear when one considers his remarks on *Inhaltslogik* in the "Ausführungen über Sinn und Bedeutung"³⁷ which possibly belongs to the period 1892–95. Frege writes:

Even if one has to concede to the *Inhalts*-logicians that the concept itself, as contrasted with its extension, is the foundation, nevertheless it should for that reason be understood not as the meaning (*Sinn*) of the concept-word, but as its reference, and the *Umfangs*-logicians are nearer the truth insofar as they locate in the extension (*Umfang*) an essential meaning (*Bedeutung*) which, though not itself the concept, is yet very closely connected with it.³⁸

We have already found that the *Inhaltslogik* is a logic of meanings. Although Frege regards the concept as primary and extension as derivative, he also considers the concept itself to be the *reference* of a concept-word. A logic of concepts, then, would be a

logic not of Sinne but of Bedeutungen (in Frege's senses of those words), hence closer to an extensional logic. The following paragraph further clarifies Frege's argument:

They [the *Umfangs*-logicians] are right when, because of their preference for the extension of a concept to its intension, they admit that they regard the reference of words, and not their meaning, to be essential for logic. The *Inhalts*-logicians remain too happily with the meaning, for what they call "*Inhalt*," if it is not quite the same as *Vorstellung*, is certainly the meaning (*Sinn*). They do not consider the fact that in logic it is not a question of how thoughts come from thoughts without regard to truth-value, but that, more generally speaking, the progress from meanings (*Sinne*) to reference (*Bedeutung*) must be made; that the logical laws are first laws in the realm of references and only secondarily mediately relate to meaning (*Sinn*).³⁹

Also, in the same "Ausführungen," Frege makes reference to Husserl's distinction between whether a name has a *Sinn* and whether an object corresponding to it exists. But he finds this distinction insufficient, for Husserl does not distinguish between proper names and concept-words, and as we saw earlier, Frege differs widely from Husserl on this point. Again there is no reference to Husserl's distinction between *Vorstellung* and *Sinn*. The one likely recognition of this is the covert statement that the *Inhalt* of the *Inhalts*-logicians, if it is not *Vorstellung*, must be the *Sinn*.⁴⁰

V

We may sum up our conclusions insofar as the Frege-Husserl relationship during the years 1891-94 is concerned:

1. The two men arrived at the *Vorstellung-Sinn*-reference distinction independently of each other.

2. Husserl's overcoming of psychologism and acceptance of a theory of objective pure logic was fundamentally independent of Frege's 1894 review of the *Philosophie der Arithmetik*. The basic change had occurred in 1891. That this should have occurred in the very year of publication of the *Philosophie der Arithmetik* is made all the more plausible by the following note by Husserl, belonging to a much later date:

I have read a great deal in the *Philosophy of Arithmetic*. How immature, how naïve and almost childish this work appears to me. Even then, with reason, I suffered pangs of conscience in connection with its publication. *Actually I was already beyond that stage of my development when I published it.* Indeed it derived in essence from the years 1886-87.⁴¹

3. (a) Frege agrees with Husserl that the concept of a class presupposes the concept of concept, that the extension of a concept presupposes the intension. (b) Nevertheless, while Husserl went on to develop the idea of an *Inhaltslogik* and subsequently a logic of meanings (though he did not quite reject *Umfangslogik*, to be sure, but wavered between (i) asserting a bare equivalence between the two logics and (ii) asserting the primacy of the *Inhaltslogik*), Frege sides with *Umfangslogik* and that for two reasons: (α) his belief that logic is concerned not with mere consistency of thoughts but with their truth-value, and (β) his theory that the reference of concept-words is the concept itself (as contrasted with Husserl's view, which may also be said to be the standard view, that the concept is the Sinn of the concept-word.)

We cannot here undertake a discussion of the question whether these two Fregean theses are acceptable. But we know now exactly where the two men stood in relation to each other between the years 1891 and 1894.

RESPONSE BY DAGFINN FØLLESDAL

Husserl's Conversion from Psychologism and the Vorstellung-Meaning-Reference Distinction: Two Separate Issues

Mohanty, in his article, contests my conjecture in *Husserl und Frege* (1958) that Frege may have been an important factor in Husserl's conversion from the psychologism of *Philosophie der Arithmetik* to the anti-psychologism of *Prolegomena*.

Mohanty supports his contestation with three claims:

- (1) Husserl arrived at the *Vorstellung*-meaning-reference distinction independently of Frege.
- (2) Husserl's overcoming of psychologism and acceptance of a theory of objective, pure logic was fundamentally independent of Frege's 1894 review of *Philosophie der Arithmetik*. The basic change had occurred in 1891.

- (3) Husserl worked out a program for an *Inhaltslogik* and subsequently a logic of meanings in "Der Folgerungskalkul und die Inhaltslogik" (1891).

I will consider these claims one by one:

First, I agree with Mohanty that Husserl did not arrive at the *Vorstellung*-meaning-reference distinction through Frege. In fact, Frege's discussion of this distinction in his letter to Husserl of May 24, 1891, to which Mohanty refers, was prompted by Husserl's use of a similar distinction in his *Philosophie der Arithmetik*. Husserl was conversant with related distinctions in Bolzano and Mill, whom he knew through his studies with Brentano.^{1*} I find Bolzano's distinction between objective and subjective *Vorstellungen* particularly helpful for understanding Husserl's phenomenology, and since 1962, when I first taught a course on phenomenology and its background, I have devoted several lectures in this course to Bolzano. In brief presentations of phenomenology, however, I often refer to Frege for this distinction, since Frege is especially clear and precise and since I can normally presuppose that my audience knows him. Still, when I discuss where Husserl got the distinction, I always mention Bolzano and Mill. See, for example, page 421 of "An Introduction to Phenomenology for Analytic Philosophers":

Frege's distinction is rather natural, and the same, or similar, distinctions have been clarified by other philosophers. There are indications of such distinctions even in Plato and Aristotle, and the Stoics made use of a distinction very similar to that of Frege. Husserl was aware of a related distinction from John Stuart Mill, and he had found similar ideas in Bolzano.²

There is, therefore, no disagreement between Mohanty and myself on this issue. Husserl definitely arrived at the *Vorstellung*-meaning-reference distinction independently of Frege.

Mohanty's third claim, that Husserl in 1891 worked out a program for an *Inhaltslogik* and subsequently a logic of meaning is, of course, also one with which I am in full agreement.

Our disagreement begins with Mohanty's second claim, that Husserl's overcoming of psychologism was fundamentally independent of Frege's 1894 review of the *Philosophie der Arithmetik*, having already occurred in 1891. That Husserl in 1891 distinguished between *Vorstellung*, meaning, and reference does not justify this claim, nor does Husserl's 1891 program for an *Inhaltslogik*. Both of these themes in Husserl are compatible with his adhering to psychologism. Whether one accepts psychologism depends on how one conceives of meanings, as psychological processes or as "ideal"

entities, as Husserl called them later. It also depends on one's epistemological views on logic and mathematics.

In *Husserl und Frege*, which Mohanty discusses, I went through Husserl's writings, including all the ones Mohanty refers to, and found that, up to and including Husserl's 1894 article "Psychologische Studien zur elementaren Logik, I-II," *Philosophische Monatshefte* 30 (1894), pp. 159-191, Husserl seems to stick to his psychologistic conception of logic and mathematics. Then, between 1894 and 1896, there occurs a radical change; Husserl never published the second volume of *Philosophie der Arithmetik* and in 1896 started on what was to become his first phenomenological work, *Logische Untersuchungen*. In *Husserl und Frege* I asked to what extent Frege's criticism of psychologism, in the introduction to *Grundgesetze* and in his review of Husserl's *Philosophie der Arithmetik*, might have influenced Husserl's development. A detailed examination of Frege's arguments against psychologism and the changes in Husserl's views during this period made me conjecture that Frege may have been an important factor in Husserl's conversion.

There is nothing in the articles and passages referred to by Mohanty which indicates that Husserl had a nonpsychologistic conception of meaning in 1891. And Mohanty does not discuss the various arguments I give in *Husserl und Frege* for the conjecture that Frege may have been instrumental for turning Husserl away from psychologism.

Let me end by mentioning additional evidence for my conjecture, which has become available during the last few years:

First, thanks to the painstaking labor of Karl Schumann in his *Husserl-Chronik: Denk- und Lebensweg Edmund Husserls*, we now know that Husserl kept working on the second volume of *Philosophie der Arithmetik* off and on until 1894, the year of Frege's review. As late as November 1894, Husserl wrote in a letter to Meinong that after a long break he was working on that volume and was hoping to finish it the next spring.³ As mentioned earlier, by 1896 Husserl had clearly given up the attempt to work out a philosophy of logic and mathematics on the psychologistic foundation laid in Volume 1 of *Philosophie der Arithmetik*.

That Husserl rejected *Philosophie der Arithmetik* is clear from the foreword to the *Logische Untersuchungen*, where he says:

I began work on the prevailing assumption that psychology was the science from which logic in general, and the logic of the deductive sciences, had

to hope for philosophical clarification. For this reason psychological researches occupy a very large place in the first (the only published) volume of my *Philosophy of Arithmetic*.⁴

The course of my development has led me to drawing apart, as regards basic logical convictions, from men and writings to whom I owe most of my philosophical education, and to drawing rather closer to a group of thinkers whose writings I was not able to estimate rightly, and whom I had consulted all too little in the course of my labours.⁵

Husserl gives the following account of his breakthrough:

I became more and more disquieted by doubts of principle, as to how to reconcile the objectivity of mathematics, and of all science in general, with a psychological foundation for logic. In this manner my whole method, which I had taken over from the convictions of the reigning logic, that sought to illuminate the given science through psychological analyses, became shaken, and I felt myself more and more pushed towards general critical reflections on the essence of logic, and on the relationship, in particular, between the subjectivity of knowing and the objectivity of the content known. Logic left me in the lurch wherever I hoped it would give me definite answers to the definite questions I put to it, and I was eventually compelled to lay aside my philosophical-mathematical investigations, until I had succeeded in reaching a certain clearness on the basic questions of epistemology and in the critical understanding of logic as a science.⁶

There remains the problem that although Husserl recommends Frege's criticism of psychologism in *Logische Untersuchungen*,⁷ and also on other occasions praises Frege's *Grundlagen*⁸ and *Funktion und Begriff*,⁹ there is no explicit acknowledgment in Husserl's work of his having been influenced by Frege. However, here are three oral expressions of indebtedness. One was reported to me by Roman Ingarden. He told me that he once asked Husserl whether Frege had influenced him, and Husserl answered, "Frege's Bedeutung war entscheidend."¹⁰ Another is reported in "From Husserl to Heidegger: Excerpts from a 1928 Freiburg Diary by W.R. Boyce Gibson." According to Boyce Gibson, "Husserl remarked that Frege's criticism was the only one he was really grateful for. It hit the nail on the head."¹¹ A third is mentioned in Schumann, *Husserl-Chronik*:

H. Spiegelberg, *Scrap-Book* (A. Osborn): Andrew Osborn visited H. 1935 in Black Forest to ask him about Frege's influence on the abandonment of the psychological approach of the "Philosophie der Arithmetik." H. concurred, but also mentioned his chance discovery of Bolzano's work in a second-hand book store.¹²

minds. As one might expect, the features and rules they report when insistently asked for their search procedures, do not, when implemented on a computer, lead to the choice of a master move. See Stuart Dreyfus, "Formal Models vs. Human Situational Understanding," Operations Research Center Report, ORC 81-3, U.C. Berkeley, February 19, 1981.

58. *Experience and Judgment*, p. 36.

1. BRENTANO AND HUSSERL (FØLLESDAL)

1. See, for example, Gottlob Frege, "Über Sinn und Bedeutung," *Zeitschrift für Philosophie und philosophische Kritik*, 100 (1892), p. 31, Frege's review of Husserl's *Philosophie der Arithmetik* in *Zeitschrift für Philosophie und philosophische Kritik*, 103 (1894), pp. 329-331, and his "Der Gedanke" in *Beiträge zur Philosophie des deutschen Idealismus*, vol. I (1918), pp. 67-70.

2.* Letter to Oskar Kraus, 1909, published in Kraus' Introduction to volume I of *Psychologie vom empirischen Standpunkt*, p. xlix. Also quoted in Kraus' notes to *Wahrheit und Evidenz*, p. 174 of the English edition, *The True and the Evident* (London: Routledge & Kegan Paul, 1966). Other important letters and essays where Brentano sets forth his view on this issue are found in Parts 3 and 4 of *The True and the Evident*, especially on pp. 77-85, 94-96, 103-104, and 112-114.

3. *Psychologie vom empirischen Standpunkt*, vol. II, p. 137, of the *Philosophische Bibliothek* (Hamburg: Meiner, 1874).

4. Brentano, op. cit., vol. II, p. 163. The translation is Terrell's, in Roderick M. Chisholm, ed., *Realism and the Background of Phenomenology* (Glencoe: Free Press, 1960), pp. 74-75.

5. Brentano, loc. cit.

6. Richard B. Arnaud, "Brentanist Relations," in Keith Lehrer, ed., *Analysis and Metaphysics: Essays in Honor of R. M. Chisholm*, Philosophical Studies Series in Philosophy, vol. 4 (Dordrecht: Reidel, 1975).

7. See particularly Alonzo Church, "Outline of a Revised Formulation of the Logic of Sense and Denotation (Part I)," *Noûs*, 7 (1973), 24-33.

8. For example, Oskar Kraus, in his "Anmerkungen" to volume I of Brentano's *Psychologie vom empirischen Standpunkt*, p. 267.

2. HUSSERL AND FREGE (MOHANTY)

1. E. Husserl, *Logical Investigations*, trans. J. N. Findlay, vol. I (New York: Humanities Press, 1970), p. 47.

2. D. Føllesdal, *Husserl und Frege* (Oslo: Aschehoug, 1958), p. 23.

3. *Ibid.*, p. 25.

4. R. C. Solomon, "Sense and Essence: Frege and Husserl," *International Philosophical Quarterly*, 10 (1970), p. 380.

5. Published in *Göttingische gelehrte Anzeigen*, 1 (1891), pp. 243-287.

6. Published in *Vierteljahrsschrift für wissenschaftliche Philosophie*, 15 (1891), pp. 168-189, 351-356.

7. *Logical Investigations*, vol. I, p. 322.

8.* Thus writes Frege:

First of all, everything becomes presentation. The references of words are presentations . . . Objects are presentations . . . concepts, too, are presentations.

A little later on: "Everything is shunted off into the subjective." [G. Frege, "Review of Dr. E. Husserl's *Philosophy of Arithmetic*," trans. E.E.W. Kluge, *Mind*, 81 (1972), pp. 321-337; esp. 323-324.]

9.* H. Dreyfus, "Husserl's Perceptual Noema," this volume, pp. 97-123. In note 17 to p. 100, Dreyfus rejects Gurwitsch's claim that Husserl discovered the distinction between real mental states and ideal meanings and refers to "Husserl's explicit attribution of this distinction to Frege" in the *Logical Investigations*, I (Findlay edition), p. 292. This reference, however, is misleading. First, this is not the place where Husserl first introduces the distinction. The distinction is introduced, first, in the 1891 Schröder review, as this paper will argue. Secondly, at this place, Husserl is only referring to Frege's different terminology.

10. *Göttingische gelehrte Anzeigen*, I (1891), p. 250.

11.* Thiel considers the terminology of 'sense' and 'reference' obligatory for all Frege works after 1890. Cf. Christian Thiel, *Sense and Reference in Frege's Logic* (Dordrecht: Reidel, 1968), p. 44. Angelelli finds the distinction already in the *Begriffsschrift* ("only the famous terminology . . . is lacking here") and in the *Grundlagen*, §67. Cf. Ignacio Angelelli, *Studies on Gottlob Frege and Traditional Philosophy* (Dordrecht: Reidel, 1967).

12. *Gött. gel. Anz.*, I (1891), pp. 258-259.

13. *Ibid.*, p. 247.

14. *Op. cit.*, p. 246.

15. *Vierteljahrsschrift f. wiss. Phil.*, 15 (1891), pp. 169, 171.

16. *Gött. gel. Anz.*, I (1891), p. 257.

17. *Ibid.*, p. 262.

18. *Viert. f. wiss. Phil.*, 15 (1891), p. 178.

19. *Gött. gel. Anz.*, I (1891), p. 249.

20. *Logical Investigations*, I, pp. 322-325.

21. *Ibid.*, p. 69.

22. *Ibid.*, p. 69.

23. *Ibid.*, p. 244.

24. *Ibid.*, p. 244.

25. *Ibid.*, p. 245.

26. *Ibid.*, p. 245.

27. G. Frege, "Kritische Beleuchtung einiger Punkte in E. Schröders *Vorlesungen über die Algebra der Logik*," *Archiv für systematische Philosophie*, I (1895), pp. 433-436.

28. In *Jenaische Zeitschrift für Naturwissenschaft* (1883), vol. 16, Supplement, pp. 1-10.

29. In *Sitzungsberichte der Jenaischen Gesellschaft für Medizin und Naturwissenschaft für das Jahr 1885* (Jena: Fischer, 1885/86), pp. 94-104 [now reprinted in Ignacio Angelelli, ed., Frege, *Kleine Schriften* (Hildesheim: Georg Olms, 1967), pp. 103-111].

30. Frege, *Kleine Schriften*, p. 105.
31. I am indebted to Professor F. Kambartel of the University of Konstanz, director of the Frege-Archiv, for making these available to me.
32. See note 27.
33. Frege, *Kleine Schriften*, p. 207.
34. *Ibid.*, p. 208.
35. *Ibid.*, p. 209.
36. *Ibid.*, pp. 209-210.
37. In G. Frege, *Nachgelassene Schriften* (Hamburg: Felix Meiner, 1969), pp. 128-136.
38. *Ibid.*, p. 134.
39. *Ibid.*, p. 133.
40. *Ibid.*, p. 133.
41. E. Husserl, "Persönliche Aufzeichnungen," ed. W. Biemel, in *Philosophy and Phenomenological Research*, 16 (1956), pp. 293-302, esp. p. 294 (emphasis mine).

RESPONSE TO HUSSERL AND FREGE (FØLLESDAL)

1.* Husserl heard mainly of Bolzano's *Paradoxien des Unendlichen* through Brentano (and also through Weierstrass). He looked at the *Wissenschaftslehre* then, but it was only somewhat later that he came to appreciate this work.

2. "An Introduction to Phenomenology for Analytic Philosophers," in Raymond E. Olson and Anthony M. Paul, eds., *Contemporary Philosophy in Scandinavia* (Baltimore: Johns Hopkins Univ. Press, 1972), pp. 417-430. This paper was first presented as one of a series of lectures on varieties of contemporary philosophy at Harvard in 1962. A longer Norwegian version of the paper was printed in 1962 in A. H. Winsnes and Eiliv Skard, eds., *Vestens Tenkere* (Oslo: Aschehoug, 1962), vol. 3, pp. 157-177. The passage about Mill and Bolzano appeared on page 163 of that version.

3. Karl Schumann, *Husserl-Chronik: Denk- und Lebensweg Edmund Husserls, Husserliana*, vol. 1 (The Hague: Nijhoff, 1977), p. 43.

4. E. Husserl, *Logische Untersuchungen*, vol. 1, p. 6; p. 42 of the Findlay translation, *Logical Investigations*, vol. 1 (New York: Humanities Press, 1970).

5. Husserl, op. cit., vol. 1, pp. vii-viii; p. 43 of Findlay's translation.

6. Husserl, op. cit., vol. 1, p. vii; pp. 42-43 of Findlay's translation.

7. Husserl, op. cit., vol. 1, p. 169 n.

8. Husserl, letter to Frege, July 18, 1891.

9. Husserl, "Bericht über deutsche Schriften zur Logik in den Jahren 1895-99," dritter Artikel, *Archiv für systematische Philosophie*, 9 (1903), p. 395. Reprinted in E. Husserl, *Aufsätze und Rezensionen (1890-1910)*, *Husserliana*, 22 (The Hague: Nijhoff, 1979), p. 202.

10.* "Frege's significance was decisive." [ed.].

11. H. Spiegelberg, ed., "From Husserl to Heidegger: Excerpts from a 1928 Freiburg Diary by W. R. Boyce Gibson," *The Journal of the British Society for Phenomenology*, 2 (1971), p. 66.