Constitution Through Noema and Horizon: Husserl's Theory of Intentionality

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1 To the Things Themselves: Phenomenology Emergent

What is phenomenology? Merleau-Ponty posed the question in 1945, pondering why the question needed to be asked nearly 50 years after Husserl had launched phenomenology. Today the question is well posed again, for philosophers have developed a variety of "phenomenologies", and we are gathered in this volume to reflect on the horizons of our tradition of phenomenological reflection.

Phenomenology is the study of experience as lived in familiar forms of perception, thought, imagination, emotion, and action. Husserl characterized phenomenology as the "science of consciousness", the disciplined study of *acts of consciousness*, as enacted or experienced from the first-person perspective: for example, "I see …", "I think …", "I imagine …", "I feel angry about …", "I act with intention to do …".

In the science of phenomenology, Husserl proposed, we are to focus on the character or structure of our lived experiences. This study is not an empirical study like psychology, but rather a logic of the phenomena of pure consciousness. Thus, we study various *forms* of consciousness we find in our everyday experience: most fundamentally, what Husserl called "intentionality".

The leading principle of phenomenology, in Husserl's program, holds that consciousness is typically a consciousness *of* something: each act of consciousness is in that sense intentional, i.e. directed toward something in a certain way. Suppose, for example, I am gazing up at a tree in my backyard. This form of experience is more or less familiar to us all, and we may begin to reflect on what this experience is like. This token experience shares a type or essence with other token experiences. In reflection on this type of experience, we begin to analyze the form of visual consciousness itself. Thus, while watering plants around the patio, hearing a crow cawing high in the tree overhead, I raise my head and look upward into the tree. And

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now "I see"—I have a visual experience of "this towering Podocarpus tree overhead, its plentiful needle-shaped leaves obscuring the crow high in the tree".

Husserl introduced technical terms designed to articulate the structure of intentionality. On Husserl's account, my current act of consciousness in seeing the tree unfolds in a shifting flow of sensory visual impressions informed by a cognitive apprehension of this large Podocarpus tree. My visual experience consists, in Husserl's terms, in a fusion of sensory data informed by an interpretive "noesis" yielding my experience of seeing "this Podocarpus tree …". The noetic part of my experience realizes an ideal type that Husserl calls a "noematic content", or "noema", glossed as "the tree *as perceived*". (Echoing Aristotle, Husserl draws on the Greek terms: *nous*, *noesis*, *noema*—for mind, mental process, mental content.)

So, for Husserl, my act of consciousness is an occurrent process of consciousness, and the act's noema is the ideal form by virtue of which the act is directed in a certain way. Moreover, my visual experience in seeing the tree carries a horizon of further significance, a pattern of further expectations about the same tree, expectations drawing on my prior experience of this and other trees—as when I have observed crows circling trees in the neighborhood.

With Husserl writing in the wake of Brentano, phenomenology would analyze the structure of an act of consciousness, featuring intentionality. Thus, in the above case of visual perception (adapting Husserl's famous example), I see this huge tree in my backyard. In phenomenological reflection on this experience, we distinguish: my conscious experience, the noematic content of my experience, and the object of my experience, the tree before me. Here we distinguish the tree itself, the botanic thing in nature, from the way the tree is given in my experience, viz. as a huge Podocarpus looming over my backyard patio. For Husserl, the noema carried in my act of consciousness embodies this way of being given in phenomenal consciousness. This noematic form of meaning (*Sinn*, in German) fans out to include a horizon (*Horizont*) of implicated meaning including something of the biology of the tree and something of its cultural significance, the latter featuring my patio and my city's designation of this particular tree as a "heritage tree".

While scholars have debated how to read Husserl's texts defining noema, I here leave aside the interpretation of Husserl's texts and focus on results of phenomenological analysis in a Husserlian style.[1] We'll focus on the structure of intentionality, the form of consciousness central to phenomenology in Husserl's wake: including *inter alia* the ontology of noematic meaning and the cognate form of meaning called horizon.

Thus, we turn to "the things themselves": *phenomena*, in the original sense of things as we are given them in our experience of the world around us. The ways things are given in consciousness we call *noemata*, forms of experience carrying the

[1] Two competing models have developed, nicknamed the "West Coast" and "East Coast" approaches to the analysis of this phenomenological structure Husserl called "noema" (from the Greek for what is known or "minded"). Roughly, the "West Coast", or "California", model takes the noema to be a richly structured form of ideal *meaning* (*Sinn*), abstracting the *way* the object is *given*, whereas the "East Coast" model takes the noema to be the *object just as given*.

meaning that structures our consciousness of things in the world. The present aim is to lay out fundamentals and motivations of the California approach to phenomenology—a particular research program in the field of phenomenology (Yoshimi et al., 2019).

On the story to follow, you might say, we bring the logic to the phenomena in phenomenology. Or, inversely, we bring the lived phenomena to the logic in phenomenology. For, as Husserl distinguished formal ontology from material ontology, the logic is the formal structure shaping the lived forms of experience we appraise in phenomenology.

2 Phenomenological Description and Analysis

Phenomenology begins in description: pure description of experience, just as it is lived and given from the first-person perspective.

"Plain" phenomenology proceeds, to begin the enterprise, with formulating a description of an everyday form of experience. Husserl famously used an example of his seeing a tree in blossom, a similar example being my seeing a huge Popocarpus tree. I begin discussion now with an example bearing a rich horizon of meaning.

I am seated near a large window, glass from floor to ceiling. I am gazing thoughtfully out the window. I see—as my eyes follow—a tall white egret, stalking something, stepping silently, stealthily, through tall April-green grass waving gently in a breeze I can almost feel even this side of the glass. I am at the Horizons of Phenomenology conference (in April 2018), beginning to think about phenomenology itself just as our group is stirring into discussion.

We may form a phenomenological description of my experience, indicating a bit of structure, in everyday language:

> I am attentively watching that elegant tall white egret, stepping stealthily through the waving grass, one long and slow step at a time, hunting something, perhaps a mouse.

More formally, simplifying for purposes of phenomenological analysis, we say:

> I now here attentively see that tall white egret stepping through waving grass.

The point of this description of experience is to begin analysis of various features of the experience as lived: a conscious, phenomenal, intentional experience, a fairly simple act of consciousness. Indeed, as I watch the serene scene of the egret's movement, I am beginning to reflect on this visual experience itself, because colleagues and I are gathered to consider varieties of forms of phenomenology more than a century after the discipline took shape.

In the California approach to phenomenology with Husserlian roots, we begin to analyze *forms of experience* by looking to *forms of our language* about our own experience which "intends" *forms of things* in our surrounding world. In this approach we model our consciousness of things in our language about our own experience as of those things. Adapting techniques of contemporary logic,

specifically semantic theory, we focus on attendant structures of meaning realized in our experience. With this emphasis, we approach the "semantic" model of phenomenal intentionality.

In this mode of phenomenological analysis, we spell out a semantic alignment of forms of language, forms of experience, and forms of things in the world. This model articulates the basic structure of intentionality.

That said, we must bear in mind that our phenomenological descriptions are designed to articulate a model of our lived, sensuous, meaningful experience such as that of my seeing the egret as I crane my neck to look out the window during our conference. In a meta-phenomenological perspective, we may even adapt model theory or possible-worlds semantics to model more precisely the rich phenomenal content of our lived experience. Still, the formal structures so modelled are precisely structures realized in phenomenal experience. Indeed, I rely on my reader's empathic sensibility for grasping the character and structure of the type of experience I am appraising and modelling.

3 The Logical/Semantic Turn in Phenomenology

Husserl brought a mathematician's eye to Brentano's conception of the descriptive analysis of the structure of consciousness. Husserl re-conceived phenomenology as a logical rather than an empirical, "psychologistic", account of mind. Phenomenology as we know it was thus introduced in Husserl's *Logical Investigations* (1900–01), which unfolded a complex structural analysis of world, language, consciousness, and knowledge: with intentionality central to the structure. In Husserl's conception of phenomenology, "pure" logic models the relations among mind, language, and world. Accordingly, pure phenomenology mirrors pure logic in articulating the logical structure of intentionality: where an act of consciousness is by virtue of its content or *Sinn* directed intentionally toward an appropriate object in the world. Husserl amplified his logical account of phenomenology in subsequent works, including *Ideas* I (1913). Therein he introduced the transcendental technique of *epoché*: we are to "bracket" questions of the existence of things we experience, and thereby to focus on the way we experience things, thus the meaning things have for us in consciousness.

To appreciate Husserl's mathematical sense of structure, and its role in phenomenology, we should bear in mind that the notion of manifold, a structured whole, is featured in all of Husserl's writings, from early to late: echoing Riemann's axiomatic re-fashioning of geometry and Leibniz's ideal of a *mathesis universalis*.

Nineteenth century logicians had championed a notion of ideal meanings including propositions (aka *Satz an sich*), articulated by Bernard Bolzano, and also Hermann Lotze and others. However, contemporary mathematical logic was taking further shape right around Husserl, in the works of Cantor, Peano, Weyl, Hilbert, and Frege. In the 1930s Alfred Tarski and Kurt Gödel revolutionized logic with theorems about the powers of logical systems. Tarski's semantic theory of truth (for

formalized languages) introduced the idiom of semantics as we know it today. A formal semantics would prescribe a structured pattern of relations—a mathematical model—between expressions in a language and the objects designated by the language: or a model, following Husserl's "pure logic", of the structured correlation between language and world, between structures of language and a model of structures of things in the world. This form of semantics can be seen as a mathematized model of intentionality expressed in language. And Tarski himself, though a pure mathematician, had studied with Polish philosophers trained by Brentano. Years later Gödel found in Husserl a philosophical vision supporting Gödel's own view of both truth and mathematical intuition.

The logical side of Husserl's thinking caught the eye of Dagfinn Føllesdal as he worked in mathematics and modal logic while reading Husserl, Frege, and Bolzano. Further, as model-theoretic semantics developed after Tarski, possible-worlds semantics emerged as a philosophical logic, specifically in the work of Jaakko Hintikka. Reading Kant and Husserl and Descartes and Aristotle alongside modal logics, Hintikka devised formal systems of semantics for our language about knowledge, belief, perception, and ultimately intentionality: philosophically inspired "models for modalities" (Hintikka, 1969).

The California approach to Husserlian phenomenology evolved in the light of these developments in logic and semantics. And accordingly, following that approach, a "semantic" conception of intentionality features a conception of noematic content as a structured ideal meaning.

4 The Fregean Perspective on Noema

As phenomenology developed in the 1960s, Føllesdal proposed a way of understanding the Husserlian notion of noema by comparison with Gottlob Frege's notion of sense, or *Sinn*. Frege's logic (or semantics) of sense and reference, of *Sinn und Bedeutung*, was familiar to many analytic philosophers who were largely unfamiliar with Husserl and phenomenology. So Føllesdal—who worked in logic and philosophy of mathematics alongside phenomenology—defined a structural parallel between reference via sense (per Frege) and intentionality via noema (per Husserl). For Frege, a linguistic expression (say, 'the morning star') expresses a *sense* (an ideal meaning) in virtue of which the expression designates or refers to an *object* (the planet Venus); similarly, for Husserl, an act of consciousness (say, seeing the morning star) has a *noema* (a form of ideal meaning) in virtue of which the act is intentionally directed toward an object (the planet Venus).

Frege himself said very little about what a *Sinn* is, but what little he said is illuminating. A Sinn embodies a "way of being given" (*Art des Gegebenseins*): that can only mean, a way of being given in thought, viz. *in consciousness*. The sense of a declarative sentence (say, 'the morning star is a planet') Frege called a "thought" (*Gedanke*). This is unmistakably the terrain of Husserlian phenomenology, and in

fact Husserl detailed his own schematic logic of sense and object, or *Sinn* and *Gegenstand*, technical details differing here and there from Frege's scheme.

From this semantic perspective on noema, and its role in intentionality, California phenomenology proceeds to study the rich formations of experience that Husserlian phenomenology explores: time-consciousness, space-consciousness, embodied perception, intersubjectivity, sociality, the life-world, and onward. Noematic analysis thus articulates the *structure* of the many ways in which we experience things. There are, however, several ways this idea is commonly misunderstood.

First, noematic meaning does not reside in some other-worldly Platonic heaven. Noematic meaning takes its ontological place *within* the concrete act of consciousness. An act's noema is drawn into the act as ideal correlate of the noesis in the act. In Husserl's idiom, the noesis is a dependent part (*Moment*) within the act, and the noema correlated with the noesis is thus an abstractable aspect of the temporal act in the stream of consciousness. Husserl said the act "harbors" or "carries" the noema in itself (*in sich zu bergen*). Ronald McIntyre and I said the act "entertains" the noema, or literally "holds" it "in" the act. Importantly, the noema is an *ideal* entity, as opposed to a spatiotemporal entity. A first cut on noematic meaning is that the noema of an act is simply the *type* of a token act of that type, what Husserl called the act's intentional essence (*Wesen*). A more refined "director's cut" on the notion holds that meanings, including noemata, are a distinctive kind of ideal entity, distinguished by their role in consciousness. (On these distinctions, see Smith, 2013).

Second, an act's noema does not stand like a veil of appearance between consciousness and the object intended. The Kantian distinction between phenomena and noumena has sometimes been taken to imply that consciousness reaches only phenomena, things-as-they-appear, and never reaches *noumena*, things-in-themselves. Kant interpretation aside, the so-called Fregean model of noema does not entail that consciousness is *directed toward* the noema, behind which lies the object. Rather, the act is directed toward the object (if such exists) but only by virtue of the noematic content the act entertains.

Formally, on the "Fregean" view, the intentional relation of act to object is a composition of two relations: the act's entertaining a noema and that noema's prescribing a certain object (enjoining the terms McIntyre and I employed). A successful intentional relation obtains only if there exists an object that satisfies the noema. If no such object exists, the act is intentional, but merely as if veridically of an object.

The noema is not, then, an intermediate object of consciousness that serves as a Platonic "representative" of the real thing, say, the actual egret which I see in the waving grass. Rather, the act's noema is an abstraction of the way the act is directed toward its "intended" object. And a *bona fide* intentional relation is achieved only if the "intention" is successful. Only in phenomenological reflection does the noema of my experience come into view as an object of my consciousness: that is the aim of the technique of "bracketing" the question of the existence of the egret as visually given in my experience.

An important extension of this semantic approach to intentionality invokes the *actual* context of an experience, especially in the case of perception. What I see, as I am visually presented "that tall white egret stepping through waving grass", is an

object in a situation within my spatiotemporal surroundings—my *Umwelt*. Accordingly, the indexical content "that … egret" semantically invokes the actual context of my experience: I am visually presented "that egret (actually now here before me and affecting my eyes)". Perceptual acquaintance thus requires a sharp distinction between the object in my *Umwelt* and the noematic content in my visual experience. As Husserl already emphasized, the "object as perceived" is distinguished from the object itself that is perceived. Indeed, the object has physical properties that the content does not—even if the content is indexical. Thus, the focal content in my visual experience of the egret already implicates features beyond, say, the purely sensory qualities of color and shape, and there we feel the pull of "horizon". For I experience the external object itself—white and egret-shaped and moving egretly—as drawing me to look it over from different perspectives in the space-time of my current experience.

5 The Horizon of Meaning in an Intentional Experience

A crucial part of the intentional content of an experience is what Husserl called "horizon". When I see the white egret stalking through the grass, I would be very surprised if on a closer look I saw the egret moving with three long legs rather than the expected two spindly legs. Accordingly, part of my seeing the egret moving is my expectation that it move as I expect birds to move—having seen many birds strut around, from pigeons to crows and even long-legged egrets. The egret's having three long legs is not a possibility motivated by how I experience the egret; however, its searching for a mouse in the grass is a motivated possibility regarding what I am seeing. Thus, Husserl held, the content of my experience "predelineates" a horizon of further motivated possibilities left open by the content.

In California phenomenology, the notion of horizon has been explicated, a bit more formally, in terms of noema. Føllesdal has sometimes characterized an act's noema as a "pattern of expectations", building horizon into the noema itself. McIntyre and I characterized an act's horizon as the structure of meaning *implicit* in the act's noema, a pattern of further noematic meanings indicating—predelineating—an open-ended array of further possibilities "left open" yet motivated by the explicit specifications in the noema.

On this model, an act of consciousness entertains a noema which takes its place in a manifold of interrelated meanings that define a horizon of meaning accruing to the act. Thus, the noematic Sinn entertained in my experience of seeing the egret implicates a system of further noematic meanings that characterize the same object in different ways compatible with and motivated by what the core noema prescribes of that object as so given. In the case of perception, as I regard "that egret stepping through waving grass", the *motivated* possibilities are circumscribed by my immediate *Lebenswelt*, as I turn my eyes toward the egret outside the window at UC Merced.

In this scheme, we may speak of a correlation among horizons of object, act, and meaning. Thus, we define a correlation among *object-horizon*, *act-horizon*, and *meaning-horizon*. Accordingly, in an act of consciousness the object is given with a horizon of further possibilities regarding the object; the object is so given by virtue of a horizon of noematic meanings prescribing those possibilities; and the act takes its place within a horizon of further possible acts regarding the object so given.

Thus, we may say: the object of a particular experience is given within a horizon of possibilities, and so given via a horizon of meanings, a system of meanings entertained in a horizon of possible experiences presenting the object in various aspects. The system of noematic meanings entertained in appropriate experiences, actual and possible, then forms a model of the range of possibilities for the object as intended in the act and its associated further possible acts. This model structure correlates object-horizon, act-horizon, and meaning-horizon: for simplicity, however, we just speak intuitively of horizon, assuming the intentional relationship among act, meaning, and object.

Such formal models chart basic structures of lived experience, where phenomenology in practice delves into the concrete ways in which we experience time, space, perceived things, ourselves and others, our *Lebenswelt*. The rich notion of horizon keeps phenomenology grounded in our lived everyday experience. At the same time, the complex structure of horizon is aptly modelled by what has come to be called "possible-worlds" semantics, to which we turn briefly.

6 The Possible-Worlds Structure of Intentionality

The notion of horizon draws possibility—*modality*—into the very structure of consciousness. Thus, we define the horizon of my experience in seeing the egret as my sense of the range of possibilities left open by the noematic content in my visual experience: motivated possibilities, possible situations compatible with what I see just as I see it ("that egret stepping through waving grass"). That the egret is hunting a mouse is such a possible situation; that it is hunting a lion is not. That the egret flew in from marshlands to the west is such a possibility; that the egret is a clever robotic drone is not such a possibility, for my current visual experience.

The Leibnizian notion of possible worlds can be used to develop a formal model of the Husserlian notion of horizon. Leibniz was one of Husserl's heroes, the notion of possible worlds occasionally appears in Husserl, and Husserl speaks of "modalities" of belief. However, we turn to more recent logical theory to amplify the Husserlian notion of horizon. In the 1950s, in the wake of Rudolf Carnap's work in the 1940s, Jaakko Hintikka (with Stig Kanger) began a style of formal semantics for modalities, not only the logic of possibility/necessity, but also the logic of obligation. And in the 1960s Hintikka outlined a style of *possible-worlds semantics* for expressions of knowledge, belief, and perception. McIntyre and I subsequently deployed a variation on Hintikka's logic of perception, explicating thereby the Husserlian notion of horizon as part of the formal structure of intentionality.

Consider again the case of my seeing the egret, characterized thus:

I now here see that tall white egret stepping through waving grass.

Not only does this experience aim toward or intend a particular egret outside the window where I'm seated. The experience intends that object within a horizon of perceptually possible worlds compatible with what the noema in my experience prescribes: a horizon of further possibilities involving the egret at work in the grass before me—not merely logically possible states of affairs à la Leibniz, but perceptually possible situations, that is, intentionally possible situations, those "motivated" in line with the noema in my experience.

On this possible-worlds model, the structure of intentionality in the egret case is a complex structure comprising: me ("I"), my visual experience (the act wherein "I see …"), the noema in my experience (the meaning prescribing "that egret" before me), the horizon of associated noematic meanings (prescribing expected features of the egret's legs and habits), and the horizon of alternative intentionally-possible "worlds" compatible with the noema conditioned by its associated meanings. Accordingly, the possible-worlds structure of intentionality may be formally rendered—mathematized—as a style of model theory: where the experience, or its phenomenological description, is structurally aligned with an appropriate array of intentionally possible worlds, and thereby this "manifold" of possibilities is precisely a model of the intentional structure of the experience featuring what is "intended".

As Husserl would have insisted, this mathematized model-theoretic structure is an abstraction from our lived phenomenal experience in our Lebenswelt. We draw upon the logical form of semantics in order to clarify the rich structure we find in our own lived intentional experience of things in our surrounding world.

7 The Constitution of Our World by Virtue of Noema and Horizon

According to Husserl's phenomenology, the familiar things we encounter in everyday experience—trees, egrets, people around us—are "constituted" in our consciousness. This idiom invites misunderstanding.

Husserl's doctrine of "constitution" may seem to be saying that things around us are constructed in our consciousness. The flavor of "is constituted" in English may encourage this view, but the German form is "*sich constitutiert*", a reflexive form of grammar not retained in English. If we say the egret "is constituted" in my experience, one may want to ask: what does the constituting? Is it I *qua* subject, or is it the act *qua* intending? No, nothing like that. The literal rendering is "constitutes-itself", or "self-constitutes", but there is no entity that does the constituting.

Rather, in a typical act of consciousness, the object is given as "constituted" in a certain way, as having a particular constitution: viz., a structure of features prescribed by the act's noema *cum* horizon. Husserl's analysis of "constitution" follows

his paradigm case of looking at an object from different sides. On Husserl's account, the object is "intended" with a pattern of adumbrations (*Abschattungen*), comprising aspects of the object as it might be seen from different perspectives. *Abschattungen*, literally, are shadings as in different perspectives in the shifting light. Thus, when I see a thing before me, I am *visually given* a thing with a back side, indeed, with many different sides, each potentially visible from a particular perspective, visible with a particular adumbration of shape, color, kind, and spatio-temporal perspective (being now there before me).

The constitution of an object in consciousness is defined by a complex structure of intentionality. On Husserl's analysis, an object is intended in an act of consciousness by virtue of the act's noema within its horizon of further possible meaning. The constitution of the object in consciousness arises within this structure: wherein the object is intended as having a variety of features surrounded, as it were, by a horizon of further possible features. The constitution of the object consists, accordingly, in the array of properties and relations prescribed for the object by virtue of noema cum horizon.

And that complex structure is precisely the form of phenomenal intentionality realized, for example, in my experience of seeing the egret stepping through the waving grass as I am seated at the Horizons conference at UC Merced.

Husserl's texts have been read by some as endorsing an absolute idealism where all the world is drawn into pure consciousness: as absolute consciousness constitutes itself and all things in the world as mere intentional artifacts (cf. *Ideas* I, §§ 49, 55). Here, by contrast, we follow a *constitutive realism* running through the results of California phenomenology. Husserl seemed to experiment with a form of idealism, a transcendental idealism, yet he regularly inveighed against a subjective or Berkeleyan idealism, and he ultimately abandoned talk of "idealism". In the spirit of reflective equilibrium, then, we pursue a model of mind and world that preserves a basic realism in the structure of intentionality. And so the egret and I are acquainted in the very real world in which my consciousness of the egret takes shape, including its "constitution" in my experience.[2]

On Husserl's account, we should bear in mind, constitution is achieved in a dynamic process of consciousness. As I notice the egret moving stealthily in the grass, I turn my head and move to get a better look at the object. Is that an egret? Looking more closely, I see, more clearly, yes, "that egret …" (not a blue heron, certainly not an osprey or an eagle …). Were I not looking through the tall window, I might walk toward the egret for a closer look. What is it doing, hunting for a fish? No, the grass I can see is not in standing water. So I take it the egret I see is stepping through the grass while tracking something moving in the grass, perhaps a mouse? I am reminded of once seeing an egret spearing something in tall grass, then tossing it in the air and catching and swallowing it. Here we see the process of my experience flowing along in time, as my anticipations regarding the egret are gradually

[2] See the concept of "Constituted Platonism" developed in (Tieszen, 2011) and "constitutive realism" in (Smith, 2020), which was originally suggested by Dagfinn Føllesdal in reference to Tieszen's work.

fulfilled by what I am seeing as the egret moves slowly within my visual field. Here the constitution of the object is a shifting pattern of significance, as I see "that white thing", then "that white bird", then a moment later "that egret", then "that egret moving step by step", then "that egret hunting a mouse in the waving grass". As my stream of experience unfolds, my visual noesis at one moment is followed by a sequence of evolving *noeses*, each carrying a distinctive noematic content. The evolving constitution of the egret I see consists in this structure of noemata—each bearing a horizon of meaning—*realized* in a temporal sequence of noetic phases in my process of observing the egret in motion.

What Husserl called "genetic" phenomenology begins with the temporal dynamics of intentional experience wherein different forms of noematic meaning are successively drawn into the subject's flowing stream of consciousness. Clearly, in the case of my evolving visual perception of the egret, rather sophisticated forms of meaning appear in the constitution of the egret in my experience. That is to say, the horizon of meaning accruing to my experience comprises ideas and concepts richer than pure sensory impressions. As I am sitting by the window, something "white" catches my attention, I see "a white bird" in the grass, I see "that white egret stepping through the grass", I see it "hunting a mouse". The concepts involved in this pattern of meaning depend on a background of not only my own experience (having seen egrets before), but also the experience and theorizing of biologists and birders who have formed the concepts I have acquired from their practices. Without those concepts, extant in my wider culture, I would not be able to see "that egret … stalking a mouse". Accordingly, genetic phenomenology places my particular experience, in seeing the egret beyond the window, within a *Lebenswelt* beyond my stream of consciousness.

8 Ontology Amid the Transcendental Turn in Phenomenology

Around 1907 Husserl took a transcendental turn, reconfiguring his fundamental conception of phenomenology, incorporating something of a Kantian perspective into his philosophy. Thus, in *Ideas* I (1913), Husserl re-launched phenomenology with the transcendental methodology of *epoché*. It is said that phenomenology turns away from the world with *epoché*. For we are to bracket, or withhold judgment about, the actual existence of what we intend in our activities of consciousness. Metaphysics, or ontology, is then to be bracketed as we practice phenomenology, or so it is said.

However, as Husserl developed his transcendental form of phenomenology, he made full use of the ontology he outlined at the opening of *Ideas* I. For Husserl, formal ontology features categories including ideal species, part-whole relations, dependencies, states of affairs, and numbers, sets, manifolds. Material ontology features substantive regions including nature (spatiotemporal things), consciousness

(intentional experiences), and Geist (social formations). Material structures of mind, nature, and society are accordingly shaped by formal structures of parts/wholes, dependence, states of affairs, groups, etc. This categorial scheme of formal and material structures weaves through the whole of *Ideas* I and *Ideas* II and onward into the late works of *Formal and Transcendental Logic* (1929) and the *Crisis* (1935–38). The transcendental in phenomenology should thus be seen through Husserl's own eyes, rather than in terms of the neo-Kantian program of avoiding both radical skepticism and all metaphysics.

Kantian transcendental philosophy seeks the "necessary conditions of the possibility of cognition": defining synthetic a priori knowledge of things in space and time as necessarily constrained by fundamental conceptual categories that shape the sensory manifold defining what is possible in the phenomenal world—setting aside the noumenal world that lies beyond our cognitive reach. Husserl's transcendental phenomenology follows a structure of *formal and material* ontological categories that find motivation not in the Kantian retreat from noumena to phenomena. Rather, the formal ontological categories envisioned by Husserl draw motivation from the developments of logic and mathematics in Husserl's day. Husserl's early conception of pure logic defined an alignment of forms among mind, language, and world, and this proto-model theory configures Husserl's results even as he follows his transcendental turn.

When we deal with ideal *forms*, in the practice of pure mathematics, or pure logic, or pure phenomenology, however, Husserl holds that we posit such forms with "evidence" or "intuition". In this way ontology and phenomenology work together—interdependently—in Husserl's systematic philosophy.[3]

Thus, *epoché* in Husserl's methodology does not eschew all metaphysics, by "reducing" the world to mere phenomena. Rather, Husserl explicitly uses an intricate ontology of formal and material categories that structure the world: including our own consciousness in its relations to the surrounding world. The structure of our consciousness is defined in terms of the material features of intentionality, noema, and horizon framed by the formal features of kinds and properties and relations, parts and wholes, dependence and independence, as well as number, set, manifold, etc. That complex structure, realized in consciousness, comprises the "necessary conditions of the possibility" of phenomenal intentional experience. Whence Husserl's logical turn in phenomenology is not replaced but ramified in his transcendental turn. This perspective is evident in Husserl's rather late work, *Formal and Transcendental Logic* (1929). Basically, transcendental logic is formal logic grounded in intentionality theory: in a more contemporary idiom, a semantic theory of intentionality.

The doctrine of "constitutive realism" at work here (cf. Smith, 2020) fits comfortably in a complex system of ontology along the lines of Roman Ingarden's

[3] Cf. *Ideas* I, §§10ff on formal and material ontology; §16 on synthetic a priori knowledge, prefiguring the introduction of *epoché* in §§27ff; and §59, on *epoché* allowing "evident" use of "formal logic and the entire mathesis [universalis]", which includes a pure logic that embraces formal ontological categories.

monumental work, *The Controversy over the Existence of the World* (written in the mid-1940s). Ingarden studied with Husserl but argued against Husserl's transcendental idealism, which Ingarden took as a form of subjective idealism. In my view, Ingarden's ontology can be seen as a richly detailed extension of key ideas in Husserl's system of formal and material ontology, obviating any radical idealism. In particular, Ingarden's system details a variety of different "modes of being". Thus, cultural works (from art to law) are, for Ingarden, intentional artifacts, dependent in their existence on our intentional activities; by contrast, things in nature are not ontologically dependent on our intentional experiences of perception, judgment, and scientific theorizing. Here is realism within a framework of intentionality and the "constitution" of egrets, mice, and fields of grass.[4]

Following Husserl, we may say both actual and possible situations are duly constituted in intentional activities but with different modes of being. Thus, the egret's movement is constituted in my perceptual experience as actual, whereas the egret's stalking a mouse is constituted in my perception merely as perceptually possible for my experience. Adapting Ingarden, we may specify the ontology more fully. Thus, the egret's walking in the grass is a situation whose mode of being is: actual, and intended in my perception, but ontologically independent of my perception. By contrast, the egret's stalking a mouse under foot is a situation whose mode of being is: not actual, but horizonally intended in my perception, and so perceptually possible for my perception, and ontologically dependent on my perception. That is, the horizonal situation (that of the egret stalking a mouse) is an intentional artifact of my visual experience, whereas the situation I see (that of the egret stepping through grass) is actual and not merely an artifact of my experience. To be clear, however, it is the same individual, that particular egret actually before me, which figures in both situations, the actual and the perceptually possible.

As we look to ontology on the horizon of phenomenology, we note that our phenomenal intentional experiences occur in a world whose structure clearly outruns the limits of our forms of consciousness and our evolving *Lebenswelt*. In the *Crisis* (writings from 1935 to 1938), Husserl worried about the "mathematization" of nature. Husserl had in mind Einstein and relativity physics, considering the differences between Riemannian and Euclidian geometry, the former defining spacetime in a relativistic way that differs from the way we seem to experience spacetime as in accord with Euclidian principles. Moreover, quantum mechanics was already on the horizon in Husserl's day, as Einstein himself saw the challenge of how quantum physics could even conceivably relate to observable objects or events (cf. the Einstein, Podolsky, Rosen thought experiment circa 1935). In a kindred spirit of "crisis", we worry today about the reduction of the intentional structure of experience to the mathematical structures of computation, as in the ontology of Artificial Intelligence. And if our lived conscious experience is ontologically grounded in neural processes in the human brain, which arguably run on quantum-mechanical

[4] Ingarden's complex ontology is laid out in two volumes, recently translated into English as (Ingarden, 2013, 2016).

principles in our natural universe, then the mathematization of consciousness is all the more problematic. Constitutive realism entails that our consciousness and the objects we experience in our *Umwelt* are real and are constituted for us through our perception, thought, and action—including our best scientific and mathematical theorizing about all the above. We await twenty-first century developments!

9 The Modal Model of Consciousness

The horizon structure of intentionality, as outlined above, assumes a notion of *intentional modality*—such as perceivability as opposed to metaphysical possibility. This notion leads into a significant extension of Husserl's own theory of intentionality.[5]

Husserl distinguished two basic components in the noema of an act of consciousness. The noematic *Sinn*, the core of the noema, articulates the way the object is given in the experience. The Sinn is modified by a component that articulates the "thetic" or "positing" character of the experience, as it were, the way the act is enacted by the subject, whether positing the object by seeing, by judging, by imagining, by willing, etc.

For example, the noematic content of my experience in seeing the egret we may characterize, simply, as follows—using angle brackets to specify noematic meaning:

< I see (that tall white egret stepping through waving grass) >

The first part of the description, < I see >, expresses the act's basic *thetic* content, by virtue of which the object is posited *perceptually*. The second part, < that tall white egret … >, expresses the act's *Sinn* content, by virtue of which the object is presented or intended *as such and such*.

Hintikka's logic of perception would cast the act's linguistic description in a propositional form, say:

David sees that (that egret is walking in grass)

schematically rendered as

$S_d (p)$,

[5] See Banick (2020), Hintikka (1969) and Smith and McIntyre (1982). A reviewer asked how modes of being given (as in perception) are being distinguished from modalities. A "modality" in the modal-logical sense is already a "mode" of a special sort: a modification in being that carries us into relevantly "alternative" situations in "worlds", thus the special trick of two-world indexing invented by Hintikka and Kanger. The terms are etymologically fused. What has been largely missed in the literature is that, beyond the model-theoretic moves in the semantics of modal-logics, and beyond Hintikka's assimilation of 'It is necessary that' with 'It is perceived/believed [by a] that', we should see a genuine ontological assimilation: a modification of the status of being from actual to relevantly/motivationally alternative to the actual. This in turn has links to the method of *epoché*.

where the perceptual modifier "S_d" is treated as a modal operator governing the sentence "*p*", which specifies the perceived situation. Semantically, per Hintikka, the perception description is interpreted as asserting: in every perceptually possible world compatible with what the subject *d* sees in the actual world, it is the case that *p*. Following this possible-worlds style of semantics, then, the possible-worlds model of intentionality assumes an ontological framework of intentional modalities alongside the familiar ontic modalities of possibility/necessity. (Similarly, probability theory divides between subjective probability, as a measure of belief, and objective probability, as a measure of physical propensity.)

Assuming these perspectives drawn from Husserl and Hintikka, I've proposed a *modal model* of the structure of self-consciousness (cf. Smith, 2004). The aim is to articulate, and to distinguish, several formal elements in the overall noematic structure of an act of consciousness. For the case of my seeing the egret, we may expand on a basic phenomenological description of the experience in the following form—again using angle quotes to specify noematic meaning:

* < Phenomenally in this very experience I now here see attentively and intuitively that tall white egret now there stepping slowly through waving grass >

Within this complex expression (*), we indicate different formal elements of noematic content, each articulating a distinctive phenomenological trait in the experience. The separated underlinings mark out these distinguished traits: familiar aspects of experience, each a target of phenomenological study over many years, beginning not least with Descartes' "cogito", or "I think …" .

The leading idea, in this modal model, is the distinction between the mode of presentation of the object, and the modality of presentation in the experience. Thus, the object of consciousness is presented in a certain way by virtue of the content,

< that tall white egret … >

Here lies the mode of presentation of the object in the experience. By contrast, the *act* of consciousness is executed in ways experienced by virtue of the *modal content*,

< phenomenally in this very experience I now here see attentively and intuitively >

There lies the modality of presentation in the experience.

On this modal model, we detail an integrated structure of specific phenomenological traits as follows:

< Phenomenally>: the phenomenal character per se of the experience.
< in this very experience>: the character of inner awareness of the experience.
< I >: the subjective or egocentric character where "I" enact the experience.
< now >: the temporal character of the experience flowing off in "inner time".
< here >: the spatial character of my experience as oriented around "my lived body".
< see >: the principal thetic character of my experience.
< attentively >: the qualifying character of focus in my experience.
< intuitively >: the evidential character informing my experience.
< that tall white egret now there stepping slowly through waving grass >: the form of presentation of the intended object, including the sense of "outer time" as the egret moves.

In particular, we note three vital aspects of consciousness given a formal twist in the modal model. Phenomenality is treated as a primitive and ubiquitous modal form, often indicated by the theater metaphor of a spotlight, within which things appear in consciousness. Inner awareness is treated as a modal qualification of the act, rather than, say, a peripheral higher-order presentation of the act alongside the object, both presented by virtue of the *Sinn* component. Self-awareness—i.e. awareness of the subject "I" in action, in seeing, or in thinking, or in willing, etc.—is treated also as a qualification of the act, not as a presentation of the subject along with the intended object, placing myself and the egret within the purview of *Sinn*, making an object of both. Awareness of temporality and spatiality appears also within the modal content, as distinguished from the presentation of the object; the egret is indeed given "now" "there" before "me", but these presented features do not "make an object" of act, subject, time, or place.

Paradigmatically, these modal features in an act of consciousness are mutually interdependent. In the case of my seeing the egret, for example, consciousness does not consist simply in the appearance of "that tall white egret …". Rather, consciousness takes the form of "see[ing] that tall white egret …", and moreover the first-personal form of "I see that tall white egret …". Of course, consciousness takes the form of "phenomenally I see that tall white egret …"; that goes without saying in phenomenology. Further, consciousness typically includes a certain awareness-of-awareness, and so takes the form of "phenomenally in this very experience I see that tall white egret …". In Husserlian ontology, the features of phenomenality, inner awareness, and subject-awareness thus form a whole wherein these features are mutually dependent parts (or "moments"): thus comprising a basic "modal" character typical of everyday consciousness. As we turn to everyday visual perception, moreover, we find an intrinsic sense of spatiotemporal embodiment, as consciousness takes the form of "phenomenally in this very experience I now here see that tall white egret …"—and where "I …" typically move around, bodily, turning my eyes and head toward the object. In the normal course of everyday experience, these distinguishable characters do not come apart, but are mutually constitutive of consciousness. For a detailed study of interdependencies of noematic content, as assumed in the modal model, see the reconstruction of Husserl's system in (Smith, 2013).

The modal model thus adds complexity to the basic form of intentionality. For intentionality consists not simply in a direction of consciousness toward an object, but in a directedness duly *modified* by a complex modal character comprising phenomenality, inner awareness, self-awareness, and even awareness of embodiment.

10 Conclusion

Our reflections have moved through horizons of phenomenological analysis, formal and material, reconfiguring the "transcendental" conditions of phenomenal intentionality. Husserl's writings constantly demonstrate an interplay between formal

and material aspects of lived experience. Consider: our consciousness of the flow of time, our perceptual awareness of the space around us, our lived as opposed to physical bodies, our experience in bodily action, our empathy with the experience of others, our collective or intersubjective experience, our normative sense of what's happening in our *Lebenswelt*, the historical and social genesis of so many of our concepts or noematic meanings, the constitution of social reality, and so on. Of particular significance today is social ontology. What count as social relations, social groups, social and legal norms, and the basic forms of social reality turn on the structure of intersubjectivity grounded in empathy and informing our evolving communal *Lebenswelt*. Accordingly, the foundations of social phenomena are interwoven with the phenomenology of empathy and intersubjectivity, explored initially in Husserl's *Ideas* II (1912/1989) and sharply articulated in Edith Stein's *On the Problem of Empathy* (1916).

The formal side of phenomenology is not a rigid and absolute constraint on what we can see in reflection on experience. We abstract from phenomena. We reflect on the phenomena and the forms we recognize therein. We revise our sense of the phenomena. And on we go, seeking a reflective equilibrium between what we experience just as we experience it and what we make of the forms of experience, the noematic and horizonal meanings that inform our everyday experience.

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