Schemas Theory Overview

Part 1

Origins of the S-prime hypothesis

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Abstract: Exploring the different organizations of our experience in its zeroth encounter with things in spacetime. The emergence of Schemas Theory as the next higher level of Abstraction beyond Systems Theory. We advance from Systemology to Schematology at the Metaphysical level and posit a new foundation for Systems Science in a broader discipline that considers all possible schemas and not just the System schema as the basis of our practical work in relation to the phenomena of experience.

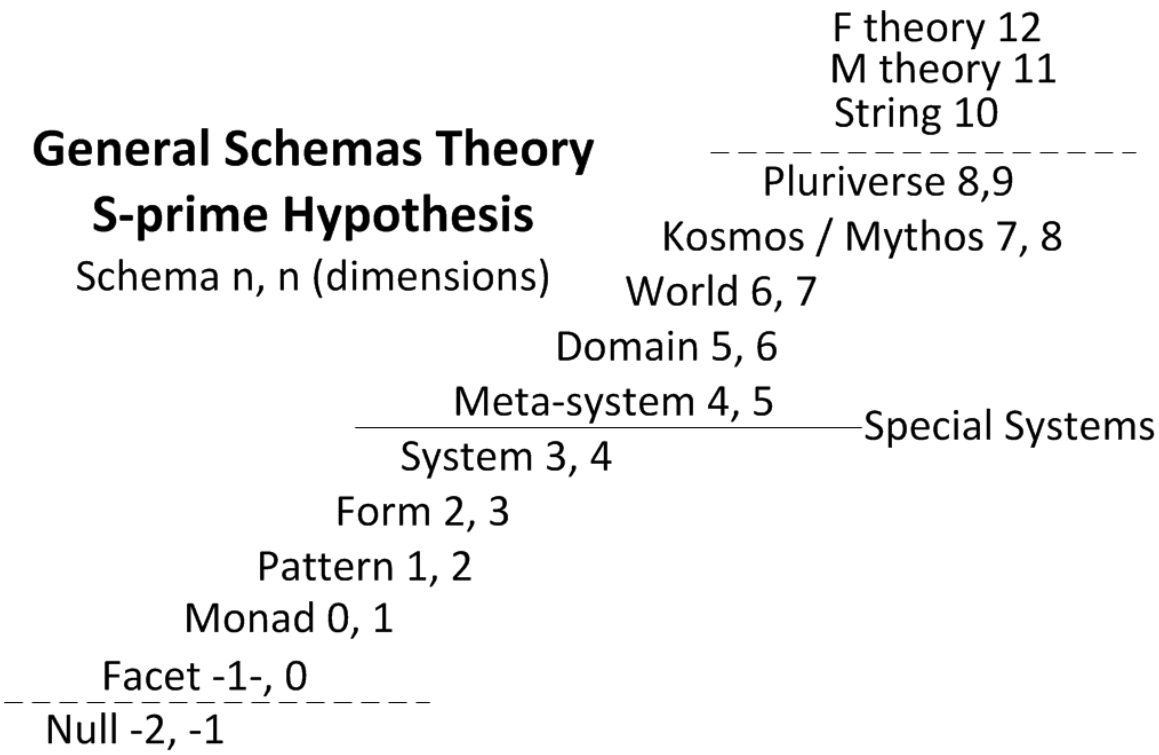
Schemas Theory is an attempt to augment Systems Theory in order to make it more robust by taking Systems Theory to the next higher level of Abstraction. It generalizes the theory of Systems by asking: *What else is there that is like a system, yet different?* By 'like a system' we mean that it gives an organization of things that is generic as a template of understanding. By 'different' we mean that each type of schematic organization that is considered must be very different from each other when we consider carefully the existence of non-systems. We know that there are other schemas than the System schema just by looking at the Western tradition because there are Patterns and Forms which are not Systems and they have very different organizations from the System Schema. And that clues us in that the next level up of abstraction from Systems Theory has to be a theory of the different types of organization very different from the organization of systems. Systems

Theory itself has become blinded to the fact that these other types of organization exist. Systems theorists believe that there are only systems in existence. But if we look back at the tradition we find that the first schema was Form and that most of our tradition was ruled by an obsession with the form schema, such that historically no other schema was recognized and worth considering. Then, about the middle of the last century, but even perhaps a hundred or so years before that if we look carefully at the historical record, the tradition started exploring other schemas which included the System Schema and the Pattern Schema. The exploration of the Pattern schema led to what is today called Structuralism. These other schemas have themselves become intellectual threads within the Western tradition and their proponents look at everything they consider though the lens of the Schema they have chosen as the Key to understanding the universe. At this time in our tradition these three schemas are the most important: Pattern, Form, and System. And in fact, there is the work of George Klir[1] in Systems Theory that combines all of these schemas into a single approach to understanding Systems which is Structural and explains Forms within the System Context. And this approach that combines various schemas together is the most advanced Systems Theory available because it has embedded in it in a highly integrated fashion all three schemas: Pattern giving Structure to Systems that explain Forms as objects within the System. However, the existence of this advanced Systems Theory that integrates various schemas together raises the question as to what other schemas might exist and what is the relationship between schemas that they can be integrated in this way. General Schemas Theory attempts to answer this question and by that provide a wider context for understanding what Systems, Forms and Patterns really *are* as ways of looking at things which are essentially different from each other.

Our answer to this question after an extensive review of the literature looking for different schemas that actually exist within our tradition independently of each other is what we call Schemas Theory based on the S-prime hypothesis. The S-prime hypothesis names the existing schemas that were found in this review and gives their order in relation to each ohter and also gives a rule by which they are connected to an organizing feature in Mathematics. In order to create a scientific theory of what Schemas are and how they work we need to connect that to Mathematics somehow. And, in this case, we make that connection through the very basic mathematical phenomena of dimensionality. We are bold and assert that there is a specific set of Schemas and no more and we say how they are related to each other, i.e. in a hierarchy of different scopes, and then we connect these schemas to specific dimensions. And the reason for this is to give a hypothesis that can be refuted so that our endeavor can be deemed scientific and not merely philosophical. Our approach is informed by Philosophy of Science[2] that says that theories need to be refutable because they cannot be proven in a positive manner but only disproven. This was the position of Karl Popper[3] which we accept. By making General Schemas Theory scientific in this way we hope to inaugurate a new field of research into schemas-in-general that identifies them, and attempts to classify their differences and similarities with each other and understand their role in science. This important role of schemas in science has not yet

[1] Klir, George J, and Doug Elias. *Architecture of Systems Problem Solving*. Boston, MA: Springer US, 2003.
[2] http://www.nbi.dk/natphil/bib/nickbib.html
[3] Popper, Karl R. *The Logic of Scientific Discovery*. London: Routledge, 2010. Popper, Karl R, and William W. Bartley. *Postscript to the Logic of Scientific Discovery*. London: Routledge, 1992.

been appreciated enough within Philosophy of Science. Schemas have been assumed to exist within the tradition without being focused on as a subject of interest in their own right. Their role in our Scientific and Technological understanding of phenomena has not yet been fully appreciated. And we assert that when this role of schema within Science and Technology is appreciated then this will itself constitute a revolution in our thinking about how Science and Technology works because it is dependent on Schematization in a fundamental way. But we can only understand that by exploring a specific set of schemas and their relations to each other such as the S-prime hypothesis posits. Because then by treating schemas systematically we can then look for anomalies that would then advance our understandings of Schemas in general. Our belief is that there are many different schemas used by Science and Technology and that they have complex relations to each other. But we can only unearth and explore that complexity by starting with a single set of schemas and looking at those schemas as a set themselves as if together they were a systematic in their interrelations. But it is a meta-system in the sense that it contains not just the System but other types of schemas that are different from the System schema such as Pattern, and Form. These various schemas have complex interrelations with each other that need to be understood in order to provide a basic foundation for how Science and Technology works. These schemas are projected on the noumena that exist behind the appearances of experience. We must bring these noumena that are schematized as the basis of the appearances into an intelligible formation that our understanding can rely on to understand different characteristics of the phenomena that would not appear otherwise. If we did not schematize the noumena before we did anything else to extract information about them then there would be no phenomena to analyze in terms of kinds, individuals and their significance. We must mention that noumena are themselves hypothetical construct introduced by Kant as something that he did not believe really existed. It was a talking point given as a hypostasis along with the other Transcendentals of Kantian Philosophy which were the Soul and God.



The S-prime hypothesis posits by abduction that there are ten schemas that exist in a hierarchy of scopes in a specific order which are: facet, monad, pattern, form, system, meta-system, domain, world, kosmos and pluriverse. In other words these schemas are nested into each other yet they each have a completely different organization from each other and the system schema is only one within the whole set. Thus, we have gone up a level of abstraction from systems theory to explore what may be Other than the system, and we are specifying those others and we find them to be different templates of intelligibility for things within spacetime. But the S-prime hypothesis goes further and specifies that one of the differences between schemas is the dimensionality that they cover. We posit a rule that there are two dimensions per schema and two schemas per dimension. This means that each schema operates at a certain pair of dimensions and that the schemas overlap in their coverage of the dimensions from -1 to 9.

So, for instance, the Facet dimension operates at dimensions -1 and 0. While the Monad schema operates at dimensions 0 and 1. That means that monads can either be zero dimensional points or strings. Monads are seen to be Matorids and thus embody dimensional independence so that both the facets and the monads are all independent of each other at their specific scopes. A monad is the least separable unit that can be isolated, and facets are non-isolatable like Quarks. Thus, monads can stand for atoms, particles but quarks are facets because they are never seen alone in phenomenal existence that we explore through experiments. The Pattern schema operates at dimensions 1 and 2. Patterns are made up of monads as their content. Forms operate at dimensions 2 and 3. They contain patterned content which they encapsulate in a shape or outline within a surface or they appear as a three dimensional solid object. Systems operate at dimensions 3 and 4. They may be configurations of forms that are static or they can be dynamically changing in time

so that time becomes the fourth dimension in this case. Systems are seen here as sets of gestalts that are coherent and thus the objects are the forms within a system that are related to each other on the background of all the other forms within the system and the system ground or boundary. The next schema is problematic because there is no single name for it in our language. We tentatively call it a Meta-system, but what we signify by that is what is *beyond* the boundary or ground of the system proper. The meta-system can also be called an OpenScape because it is what is open to the horizon from the boundary of the System within the fieldscape that surrounds the system that offers a panorama. Systems and Meta-systems are inverse duals of each other. And we connect the System to the *restricted economy* of Batallie while we associate the Meta-system with what he calls the *general economy* in the book Accursed Share[4]. Meta-systems are anomalous because they are discontinuous while the system boundary or ground is assumed to be continuous. They are dis-unified and detotalized while the System is assumed to be totalized and unified. Everything about the Meta-system is the inverse dual of the System. Deleuze calls them Ideal or Divine Games that he contrasts to normal games. Since Meta-systems do not have a unified name within our tradition we can see them as environments, ecosystems, situations, contexts, ambience, milieu of the system. But the key is that they operate at dimensions 4 and 5 and thus have an extra time dimension or a four-dimensional space dimension that they add to the first dimension of time that is expressed at the System level schematic scope. Thus, in real-time systems there is a round robin cycle that gives processing time to different tasks that are running and this is the expression of the fifth time that is different from parallel time operations and makes them possible in the absence of separate hardware to run the tasks upon. But this fifth time may also be the hardware dispersion of tasks on different processors. The point is that this fifth dimension of time is orthogonal to the different parallel timelines within the real-time system allowing many separate parallel tasks to operate simultaneously. When we go on to the Domain schema we find it operating at dimensions 5 and 6. It is a rigorous and disciplined set of perspectives. On the other hand, the World schema operates at dimensions 6 and 7 and it contains all possible perspectives within a singular all encompassing ultimate horizon of human experience. The Kosmos schema operates at dimensions 7 and 8. It is associated with the physical universe since the advent of the Metaphysical Era with Thales and Anaximander. And beyond that we posit is the Pluriverse Schema that operates at dimensions 8 and 9. The Pluriverse is at the limits of our ability to schematize. What lies beyond it is String Theory in the tenth dimension of which there are five that are unified into M-theory in the eleventh dimension. But String Theory and M-Theory are unschematized, and thus we have a hard time understanding them because we have no convenient schemas to fit them into to make them intelligible. Beyond M-theory is F-theory which is even stranger in that it has orthogonal physical timelines that are generated spontaneously within it when it is formulated. Physics as a discipline has a hard time thinking about time anyway, and so does not know what to do with orthogonal physical timelines. But if they exist then they break the hold of Metaphysical Era on us which imposes a linear concept of time in which all the moments of time whether Past, Present or Future upon a single timeline.

[4] Bataille, Georges. *The Accursed Share*. New York: Zone Books, 1988. Three volumes.

This is the entire hierarchy of schemas that are recognized by the S-prime hypothesis and these are their associated dimensions according to our theory. By specifying the scopes of the schemas and identifying specifically the dimensions that they operate at we can then attempt to phenomenologically verify this hypothesis. The question becomes whether there are any gaps in the nesting of this hierarchy of schemas? Are there any schemas left out of consideration that are significant to our understanding of the experience? Are the limits of schematization well defined? What can we say about the differences in organization of these schemas and how do they themselves operate as a system or meta-system through their mutual relations. We can consider them systematically and focus on their relations with each other. But we recognize that what we are considering systematically here is not a form but schemas themselves operating together at different dimensions as descriptions of various orders of spacetime. And because they are all different they are open to anomalies within experience so they also form a meta-systemic field from another viewpoint that orients us to the horizons of our experience.

Because we are discussing Phenomenology as a way of approaching the validation of the S-prime hypothesis we wish to invoke a specific phenomenology. We will use as a touchstone the phenomenology of Romano in At the Heart of the Reason[5]. One reason to use this phenomenology is that it is the first attempt to include within Phenomenology proper both System and Structure as fundamental organizing ideas. And so in many ways it is similar to Klir's approach which combines Formalism with concepts of Structure and System to produce a mathematically sophisticated Systems Theory. Romano takes phenomenology that is traditionally focused on the Form schema and adds to that a concern with Structure and System. Another source we would like to appeal to is Puntel's Structure and Being[6]. It is the first attempt to produce a unified theory of Being in Analytical Philosophy on the order of Heidegger's Being and Time[7] but rooted in Wittgenstein's approach taken in the Tractatus which is an worked example of Frege's suggested approach to Logical foundations that he suggested in his Logical Investigations[8]. Puntel considers Being as a Logical Systemic Structure. Thus there are a few scholarly works in different realms of philosophy that have recently done what Klir has attempted by combining schemas at a philosophical level in both the Continental and the Analytical philosophical traditions which gives a possible foundation for our theory of how schemas can be combined in a nested fashion which is explained phenomenologically and metaphysically in these other works that support Klir's original insight that schemas need to be interrelated to produce a more powerful approach that is transdisciplinary.

We should make the point that forms are the basis for proofs. But where patterns are the basis of explanations, systems are the basis for description. Meta-systems merely

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[5] Romano, Claude. At the Heart of Reason. Evanston, Illinois : Northwestern University Press, 2015.

[6] Puntel, Lorenz B. *Structure and Being: A Theoretical Framework for a Systematic Philosophy*. University Park, Pa: Pennsylvania State Univ. Press, 2013.

[7] Heidegger, Martin, John Macquarrie, and Edward Robinson. *Being and Time*. Malden: Blackwell, 2013. Heidegger, Martin, and Joan Stambaugh. *Being and Time: A Translation of Sein Und Zeit*. Albany, NY: State University of New York Press, 1996.

[8] Frege, Gottlob. *Logical Investigations*. Oxford: B. Blackwell, 1977.

indicate. Thus when you combine the schemas you get a much more powerful means of approaching a subject with a greater arsenal of methods that otherwise would not be as compelling if these schemas are taken alone. We should also make the point that Formal Systems are composed based on three aspects of Being which are Truth, Presence and Identity. Identity is a First, Truth is a Second, Presence is a Third and Reality is a Fourth in terms of the Philosophical Principles of Peirce and Fuller. Formal Systems are based on an axiomatic platform that delimits the elements that can exist in the Formal System. The relations between these three aspects gives us the properties of Clarity, Consistency and Completeness. When the Formal System is confronted by Reality then we get three other properties which are Coherence, Verifiability and Validation. This confrontation between the model and reality gives significance and meaning to the Formal System. For this Formal System to become structural then we need to consider the organization of the content which is different from the organization of the forms that control and encase the content. As we have said Hegel demands that we reconcile the differences between Form and Content. But we can say that also with the Context of the Formal System which is a meta-system. The structure comes from taking apart the Formal System and looking at the possible combinations of the elements that make up the content of the Formal System. Different combinations of elements lead to different capabilities and capacities that are built up one at a time from the basic elements of content within the Formal System. Based on changes to the Axiomatic Platform different capacities and capabilities are actualized for various configurations of the Formal System. It turns out that there are meta-systems both inside and outside the Formal Structural System. But as pure formalism or pure structuralism we do not get a feeling for how these Formal Structural Systems really work in a pragmatic sense and for that we need to explore them phenomenologically.

To study Schemas Theory we need phenomenology because it is a way that we process experience in terms of handling anti-aspects such as difference, fiction, absence and illusion in order to produce identity, truth, presence and reality and we need to appeal to experience in order to understand how it works. But we must as Romano does combine this phenomenology with hermeneutics as Heidegger suggested in order to be able to understand the meaning of the characteristics of experience associated with schemas. Ontology is relevant because when we process experience we are concerned with how that changes what we can see that lies as noumena beyond sensory perception. Schemas are Ontological, that is inherently philosophical in a metaphysical sense because they are a priori projections on the manifolds of experience. Schemas do not exist as things in the phenomenal world, but only as part of the chain of processing experience within us. Schemas are not ontic like various phenomenal thresholds we find as emergent, i.e. non-reducible, in Science like: quark, particle, atom, molecule, macro-molecule, cell, organ, organism, socialiality, ecosystem, gaia. Rather schemas are projected on to these various entities found at these ontic emergent levels as different ways of understanding their constitution within experience. Dialectics is also relevant because we must move from looking through the lens of one schema to looking through the lens of another schema in order to compare and contrast them. Thus, there are dialectical movements

(conceptual leaps from schema to schema) involved in our attempts to understand the nature of schemas that we project on experience. Schemas Theory is in the province of Metaphysics because it is a way of looking at the things in experience that renders them intelligible and different specific organizations of spacetime. They are templates for our pre-understanding of things prior to any specific dimensional phenomena. We posit that the schematization of any given phenomena is first given in Passive Synthesis to our experience and that we normally accept that without a second thought.

But occasionally we realize that a phenomena can be better schematized in a different fashion and so we following Lawson in Closure[9] open back up the *material* of the schematization and re-schematize it in a different way and then close it back up repackaged as understood through a different schematic template. This is an arduous process and so we only engage in that type of repackaging in a different template of intelligibility if there is a big gain from so doing. Opening up the already closed material of experience and re-schematizing it is an arduous task because that is an active re-synthesis of an already given passive synthesis that we had to do no work to receive. However, it does happen, and it is undertaken when the schemas that were originally assigned unconsciously do not fit well what we understand concerning the nature of the phenomena under investigation. But normally we have only two different schemas to choose from for any given phenomena we might wish to re-schematize. However, it is possible by analogy to present any phenomena as organized based on various schemas that are near to it in its intrinsic dimensionality. This highlights the point that schemas are projections onto phenomena, but they are projected initially unconsciously and that is one of the reasons that a separate science of schematization has not been developed before this. It was a surprise but I could not find anyone who had developed the idea of schemas before in other disciplines such as Architecture or Fine Art Criticism where one might expect such a discipline to have spontaneously formed in the process of analyzing these disciplines internally because they are so focused on the relations between various schemas that appear in Art or in Architecture. But the proto-schemas theory of these disciplines is just as disorganized as it is in Science in general and Technology specifically. That disorganization can be seen in the mention of various schemas in Wittgenstein's Philosophical Grammar[10]. They are just not thematized as schemas and thought of as a set with any similarities to each other. To do that we need to understand that we are operating on a higher level of abstraction where the difference is what counts and the more different the better. The similarity of the schemas are in terms of function as templates of intelligibility of phenomena. Here it is difference that is prized in organization of these schemas and their relation is one of orthogonality to each other. What seems obvious once it is realized that there exist in our tradition different schemas is to consider

[9] Lawson, Hilary. *Closure: A Story of Everything*. Florence : Taylor and Francis, 2005.
[10] Wittgenstein, Ludwig, Rush Rhees, and Anthony Kenny. Philosophical Grammar: Part I, the Proposition, and Its Sense, Part Ii, on Logic and Mathematics. Berkeley: University of California Press, 2005.

thinking about them systematically which has never been done previously as far as I can tell by survey of the literature. The closest I came to finding anything of that kind was an article that recorded the conversation with Christopher Alexander reported by a colleague[11] of his in which there was a diagram that describes schemas. I was very excited to find this one definitive precursor to General Schemas Theory.

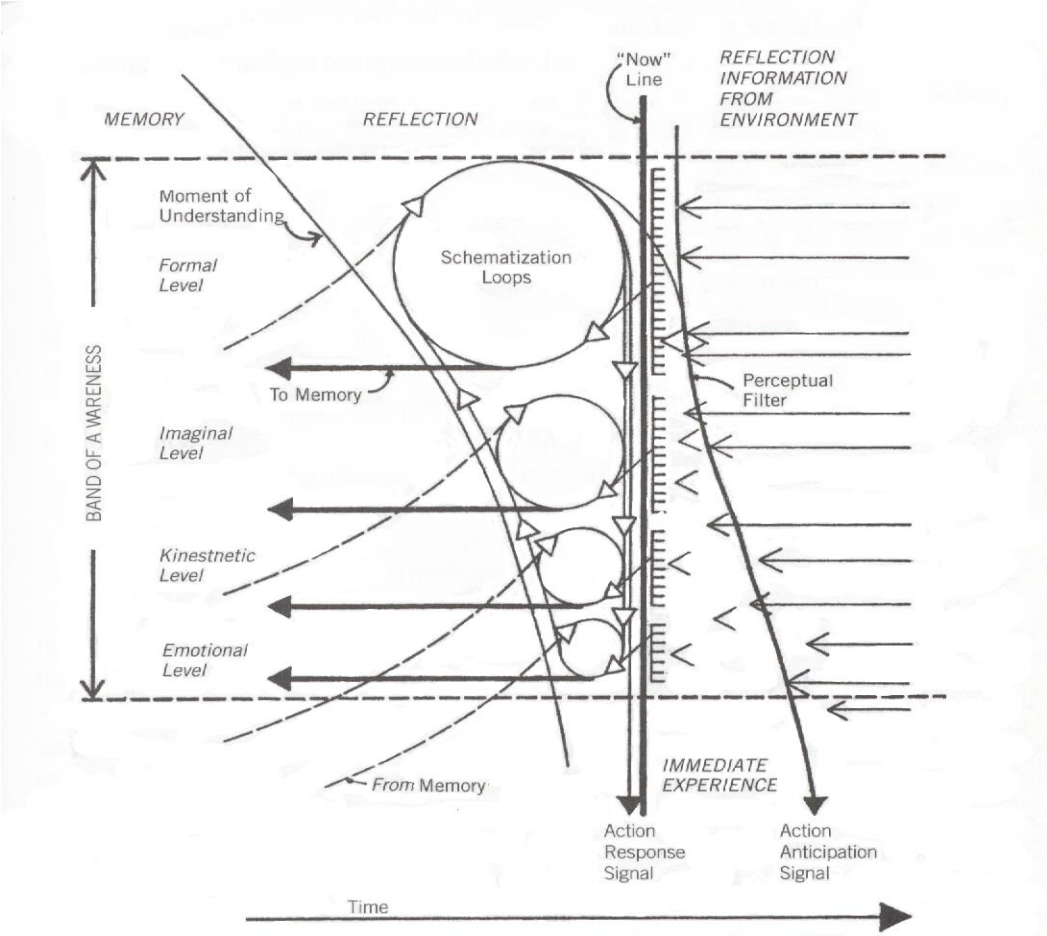


Figure 11.4. Charles W. Rusch, total diagram: a function model of mental process. Courtesy of Charles William Rusch, Eugene, Oregon.

This diagram is a description of the phenomenology of experience at the level of awareness. It describes schematic loops that are like *drives* in Lacanian theory in as much as they are autonomous cycles that operate behind the filters at various levels of the processing of experience. Those filters are seen as the comb-like elements just before the Now point line in the diagram. The filters are feelers like those in an insect that pick up the sensory experience that is immediate and funnel them into the processing by a schematic loop which attempts to categorize the incoming phenomea based on previous experience in order to make a connection to the associated action

[11] Charles W. Rusch, "On Understanding Awareness", Journal of Aesthetic Education 4. no. 4 (Oct. 1970):58; Cited in Sensory Design J.M. Malnar and F. Vodvarka, U. Minnesota Press 2004

complex that is the learned response. Notice that Schemas Theory operates on the Formal Level. Once the schematization occurs there is then a moment of understanding in which the phenomena is comprehended as a known configuration in spacetime. This produces a response in action toward the phenomena. However, the most fundamental work of schematization is to allow us to anticipate in our action what will be required as a response to given situations that occur. And this is why the schematization is part of the passive synthesis and is for the most part unconscious. There is a perceptual filter which is looking for specific types of cues in our experience and it projects them onto experience in anticipation that experience will coincide to our expectations. Notice that Linear time is assumed in this diagram.

Notice also that the Passive Syntheses that are described by Deleuze in Difference and Repetition[12] and Logic of Sense[13] that are taken from Heidegger and Kant but ultimately from Husserl are mentioned. For Deleuze there is Imagination as a first synthesis (Verfallen, anti-existentials including confoundedness or ambiguity, curiosity, and idle-talk) relates to the present and comprehends immediate experience in the Present. The Present in its different scopes Deleuze associates with Chronos. Then second there is the synthesis (befindlichkeit, thrownness) of Memory that stores up what we have learned and then makes it available to us at a later time related to the Past. After that there is Thought which is the third synthesis (verstehen, projection) that makes what has occurred comprehensible and relates it to the future. Past and Future Deleuze associates with Aion. But Deleuze implicitly makes the point that there is a prior Zeroth synthesis before imagination which is gives us sense that is both meaning and sensation together. We associate this prior fourth synthesis that appears in Wild Being and that is associated with intensity and implicit order with Rede and the Mitsein and as a moment with the CoNow. This fourth synthesis prior to imagination we might associate with Greek Kairos[14] which is the right moment in Time. Deleuze associates this forth moment of time that is aspectual with expression as used in Spinoza.

However, on rare occasions experience may surprise us[15]. When it does it takes more processing power in our brain to classify anomalous experiences. But from studying these surprises we learn that first we schematize, i.e. we project a spacetime configuration of the phenomena, and then after that is accepted and validated by our immediate experience then we classify the phenomena in general terms by its kind. After that we may then see individual characteristics of the phenomena appear and then the last thing we do is assign a significance to the experience of the phenomena. The point is that schematization in spacetime comes first because it is in that process where we recognize the organization of the phenomena such that we can identify its

[12] Deleuze, Gilles. *Difference and Repetition*. London : Bloomsbury, 2014.

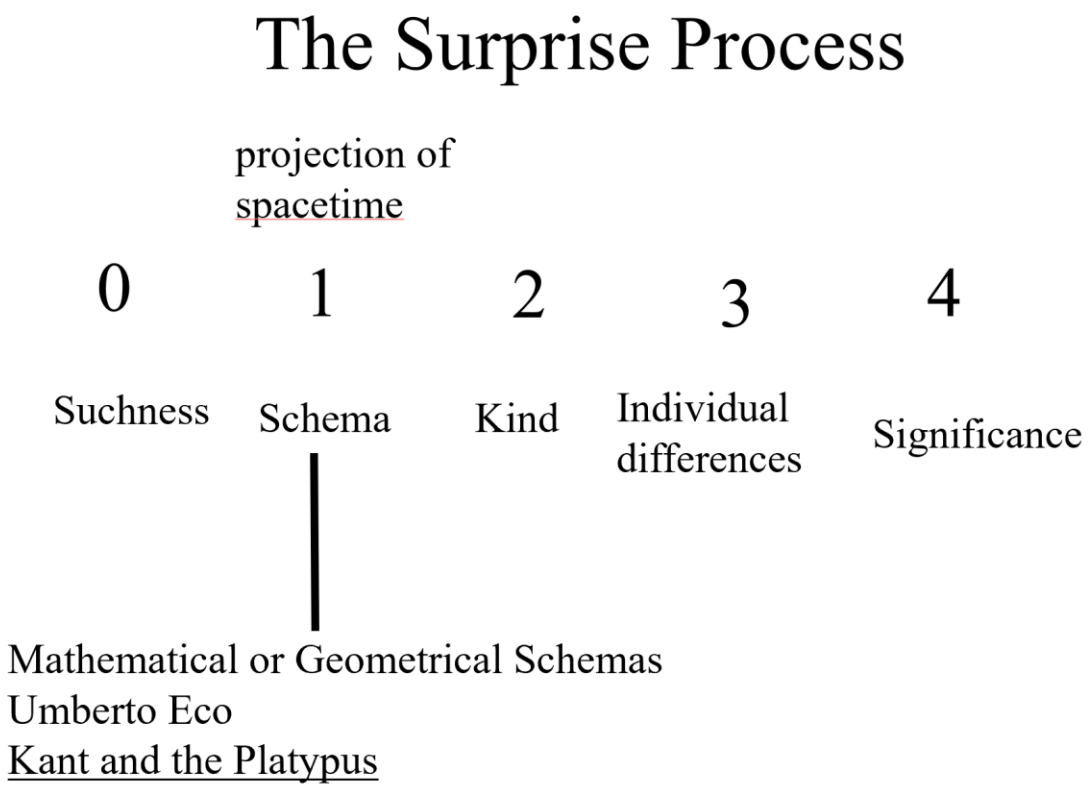
[13] Deleuze, Gilles, Contantin V. Boundas, Mark Lester, and Charles J. Stivale. *Logic of Sense*. London : Bloomsbury Academic, 2015.

[14] https://www.wikiwand.com/en/Kairos

[15] Kagan, Jerome. *Surprise, Uncertainty and Mental Structures*. Cambridge, Mass.: Harvard U.P., 2002.

substance, i.e. its coherence as something distinct within spacetime. We identify that it has substance, i.e. identifiable distinctness within spacetime, before we determine the kind of thing it is, or its individual characteristics, or its significance for us.

Notice that Schematization occurs in the zeroth synthesis of Deleuze. Note that in terms of the syntheses kinds are associated with memory, individuals with imagination, and thought with signification. This is because there is a difference between surprise and normal processing not associated with surprise. The three syntheses are traditionally thought of as not having any relation to surprise in Kant and Heidegger where these syntheses are elaborated. It is assumed that the individual comes first then its kind and then its significance. But in surprise the general comes before the particular which is not how things are described in the philosophical tradition that forgets the possibility of surprise. In surprise we see the schematization at work that is normally hidden because first of all something has to be recognized as being there. And we can easily associate this with a zeroth synthesis of sense. We sense that something is there even though we have no idea what it is. Later if we have time we identify its kind, then we fill in individual characteristics and even later fill in significance. Deleuze has essentially discovered the chain of processing of surprising events by the brain. If it is not in a hurry then we can imagine that the individual thing comes first, and after that its kind before its signification is deduced. The order of activation of surprise is what is best for survival in uncertain times. It is the way that reflex reactions are able to react most efficiently with the least amount of information at each critical stage of the process of reacting and then recognizing controlled by the unconscious. And so we use the order of surprise as the way to understand how the faculties operate together and it is the way that reveals that schematization is first. But it also allows us to associate it closely with the zeroth synthesis of sense in Difference and Repetition.



There are many different uses for the term "Schema" in our tradition[16] and Umberto Eco explains them in his book Kant and the Platypus[17]. In that book he describes 'Mathematical and Geometric Schemas'. That is what we mean when we use the term Schema here rather than its myriad other possible meanings. It is the schematization of spacetime that is understood in a Mathematical or Geomatical way in this case by relating the templates of understanding that are so different from each other to the dimension of the thing that has been schematized in that particular organization. The thing schematized is ontic at some emergent threshold of phenomena, but the schematization itself is ontological in that it has to do with the projection of Being upon the manifold of experience with a certain organization that is a priori which we see first in the formal schematic loop. There are other more primal schematizations at work at the emotional, kinesthetic and imaginal levels which we are not considering here. These are intrinsic to our finitude in as much as we have emotions as mammals and we are embodied and so are acting in spacetime ourselves with a body schema that orients us to our immediate environment. The Imaginal level has to do with Jungian archetypes that we project onto experience that are ingrained in human experience by the fact we have fathers and mothers and siblings and other social and cultural relations that are fundamental to whom we are as finite humans that are common to all human beings. But because here we are concerned with

[16] https://plato.stanford.edu/entries/schema/
https://www.wikiwand.com/en/Schema_(psychology)

[17] Eco, Umberto, and Alastair McEwen. *Kant and the Platypus: Essays on Language and Cognition*. London : Vintage Digital, 2014.

Science we are specifically focusing on the Formal Schematic loop, and what we are saying is that it does not just process things in the Form Schema, but also other schemas like Pattern, and System, as well as OpenScapes and Domains or Worlds. Once a successful schematization has occurred and we have based our anticipatory action on it and that action was successful in the Pragmatic sense of the term used by Peirce then that Schematization and its use in our interaction with specific things in spacetime is encoded into our memory and projected in the moment through the imagination which is producing the schemas as one of the side effects of its action of giving us a remembrance of the events in our lives on which we base our anticipations of events though the understanding of what is happening in thought. It needs to be mentioned that schemas are what makes sense of our environment and our relation to things in our environment. And at this Zeroth synthesis level there is a nondual fusion of sense as sensation and sense as making sense in terms of meaning. We sense what is there in a gross way in a blink and react to it perhaps unconsciously as a "snake". All we know unconsciously is that something is there that fits the schema of snake form with its patterning. But if we get to consciousness then we discover that it is a rope as a kind of thing. Our reaction was a false positive but perhaps it is something we should react to just based on its essence, perhaps it is a noose that we are being threatened with. But then if we have more time we become aware of the individual characteristics of the rope and see that it is actually frayed and will not support our weight. But finally in thought we perhaps recognize the situation as a confrontation with vigilantes. It is very important that in the case of surprise we go from the most general to the most specific in a series of steps different from the sequence that Heidegger and Kant guessed would apply to normal perception and cognition where there is no surprise. But where there is no surprise there is also no information.

The key idea here is that in the case of surprise the schematic Zeroth synthesis becomes more apparent and the order of the other syntheses change. Of course, the most intense surprise is elicited by the Emergent Event. And in the Emergent Event there is the advent of a Face of the world combining all the different kinds of Being into the same tableau, as for instance in the Trojan horse entering Troy, which is the proto-typical Emergent Event in our tradition. When there is no surprise then it appears as if there are just three syntheses operating and imagination comes before memory. But when there is surprise then we get a glimpse of the Zeroth Synthesis of Sense that is implicated and intense revealing Wild Being. And we get the Memory that allows us to recognize Kinds before Imagination that allows us to see individuals in all their particularity and haecceity. Thought in both cases is the last synthesis in the series. Imagination is the synthesis that allows us to see Sensory Perception of Individuals. Memory is what allows us to recall and recognize Kinds. Thought allows us to project the intentional constitution of meanings of things. For Deleuze Thought is a failed synthesis related to the Empty Form of Time which breaks open to reveal Ideas which then refer back to the Zeroth Synthesis which is virtual. Imagination produces Actualities. Memory gives us a sense of Identity (First, isolata), Truth (Second, relata), Presence (Third, continua) and Reality (Fourth, synergy) in other words it gives us access to the aspects of Being as a basis for comprehending Kinds

by which we classify things and which sets up our expectations based on past experience of these various kinds of things. Thought is our attempt at understanding the world in which we live but it also projects the constitution of the meaning of things in experience. For Bergson in Matter and Memory[18] there is really only Imagination and Thought and Memory comes first which Imagination trails with the past overwhelming the present.

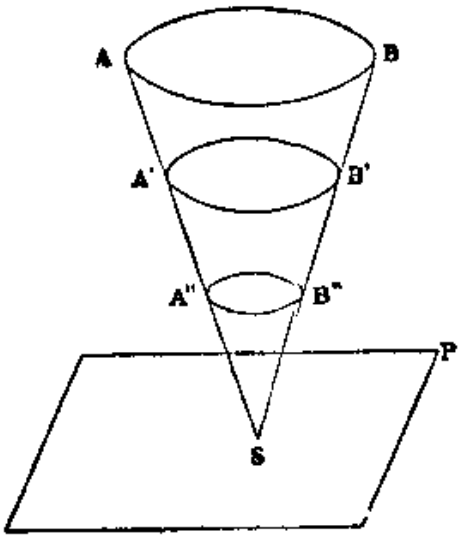


FIG. 5.

Bergson's Cone of Memory on the Plane of Perception where S is image of Body[19]

For Deleuze Past and Future are collapsed together into Aion, with the Present being at various scopes of Chronos. But he ignores the fact that Kairos the other form of Greek time might represent the CoNow that is implied by having a Zeroth Synthesis. Bergson sees Memory as the realm of Paramedian Pure Being and the Imagination as the Present of Sensory Perception as the realm of Heraclitan Becoming. This means that Thought is relegated to Hyper Being as the expansion of Being in the World into the realm of possibilities and thus the realm of intension beyond extension seen as either static or in flux. This means that the virtual realm of Sense that is the Zeroth Synthesis which provides the Ideas as problematics is then related to Wild Being which is the contraction of being-in-the-world toward the singularity of Ultra Being. The fact that the two central syntheses exchange places in the event of surprise only means that in the case of surprise that Being comes first rather than Becoming while in the normal course of events flux Sensory Perception is first and stasis as Memory of Kinds comes later. In this case Being and Becoming are only changing places.

STOP

[18] Bergson, Henri, Nancy M. Paul, and Mary E. Dowson. *Matter and Memory*. Kent Solis Press, 2014.
[19] https://brocku.ca/MeadProject/Bergson/Bergson_1911b/Bergson_1911_03.html

Notice that this diagram refers to the band of awareness. Awareness is different from intentional consciousness which is related to the Active synthesis we produce while Awareness is related primarily to the information processed by our unconscious to produce Passive Syntheses of things presented to us within our experienced already comprehended and understood as the basis of action, perhaps already acted upon in a reflex action that comes to consciousness as the basis of further action. Awareness is not something that was addressed by Phenomenology originally in the work of Husserl. It was added by Gurwitsch[20] who considered the margins and fringes of consciousness and to some extent the action of the unconscious underwriting conscious experience. One of the major contributions of Continental Philosophy is to integrate our understanding of the Unconscious into Phenomenology as we can see happening with Merleau-Ponty and especially Deleuze in his Transcendental Empiricism[21]. Romano's way of dealing with the unconscious is to introduce the idea of System and Structure into our understanding of Phenomenology going beyond mere formalism of earlier phenomenology incorporating some of the insights of Heidegger to produce a more adcanced phenomenological description of experience. Puntel does the same thing in order to ground our understanding of Being from an Analytic perspective. There is no doubt that the projection of Schemas is a part of our projection of Being in general which Heidegger tried to capture in the concept of dasein (being-there or being-in-the-world) in Being and Time. It is seen as the part of the human existence that is projecting Being on everything and thus giving rise to the world in which it lives as a coherent umwelt (environment to exist within, i.e., a meta-system). The projection of Being is seen by Heidegger as an ecstasy and he separates that ecstasy as existence from the Being of things that are projected in that ecstasy. Thus, he differentiates Being from beings and this is called Ontological Difference. The projection of Being is called 'ontological' while the things that have being, the beings in the world, are seen as 'ontic'. But dasein has a special place because it is also a being-in-the-world at the same time as it is ecstatically projecting the world as a whole itself that appears as environment for its own action within time. Both Puntel and Romano are taking from Heidegger major points and then using them to construct a story concerning Phenomenology and Hermeneutics on the one hand or Being in general on the other. Being is seen by Puntel as an abstract concept that organizes our experience from the point of view of Analytical philosophy based on Wittgenstein and Frege in a way similar to Heidegger's framing of Ontology in Being and Time. The fact that an Analytic philosopher would make this kind of concession can be seen as the proof of Heideggers dominance of Philosophy since the French Renaissance in philosophy after World War II in which Heideggerian themes are dominant. But our point is that all these adaptations of Heidegger's approach toward

[20] Gurwitsch, Aron. *The Field of Consciousness*. Pittsburgh, Pa: Duquesne Univ. Press, 1964. Gurwitsch, Aron, and Lester E. Embree. *Marginal Consciousness*. Athens, Ohio: Ohio University Press, 1985. Gurwitsch, Aron, and Lester Embree. *Phenomenology and the Theory of Science*. Evanston: Northwestern University Press, 1979. Embree, Lester E. *Gurwitsch's Relevancy for Cognitive Science*. Dordrecht: Springer, 2005. Gurwitsch, Aron, and Jorge García-Gómez. *Constitutive Phenomenology in Historical Perspective*. New York: Springer, 2010.

[21] Rölli, Marc, and Peter Hertz-Ohmes. *Gilles Deleuze's Transcendental Empiricism: From Tradition to Difference*. Edinburgh : Edinburgh University Press, 2016.

understanding Being has implicitly within them a place for Schemas Theory to help understand the nature of our relation to things we find within spacetime as having an a priori organization that acts as a template for our interaction with them at a given dimensional level, and that these templates of intelligibility of phenomena based on schematization is a basic part of our processing of experience as suggested by Rusch based on his conversation with Christopher Alexander one fine day that we are lucky that he saw fit to document. This is because it is one of the few instances in the literature that I can find that addresses Schematization directly as an element in the processing of sensory experience bringing them to cognitive comprehension. But this digest is of course rooted in Kantian Critical Philosophy where the Schemata were first proposed as the way that Categories get related to Time as they are applied to manifolds in experience[22]. But in Kant space and time were absolute singulars and were not related to each other and so the application of schemas to categories could be seen as a separate process from the differentiation of the categories themselves and their application to experience. But we know from Einstein now that spacetime is a single singular and not two. And so, like Cassirer in Philosophy of Symbolic Forms [23] we need to unify Categorization with Schematization so that schemas become the central part of our processing of experience which is considered now primarily dynamic and not static. It is only static in the fourth dimension while it is dynamic in the processing of sensory perception in the third dimension running along with time as the fourth dimension. Kant is the one who said that System Hypothesis is necessary for the pursuit of Science, we must assume that phenomena are ultimately coherent in order to make Science possible. So, Kant is the one to elevate System schema to a prominent role within our tradition. Bertalanffy[24] was attempting to make concrete Kant's suggestion in his third critique, i.e., the Critique of Judgement[25]. Hegel in his *Preface* to the Phenomenology of Spirit[26] did the same thing with Structure, generative patterning of content, in that he demanded that we reconcile the content of our categories with their Form and vice versa. He said we cannot afford to merely project arbitrary Forms on experience regardless of the content that they are seen to contain. Rather Forms and Content both need to mutually be reconciled with each other and this is precisely what leads to Structuralism because that is the way that the content is considered to interact with itself within its projected formal container. Content is patterned and the pattern gives rise to structure which is seen when it subsists although form is transformed. Changes in Content as well are called Transmutations. Basically, Pattern and System schemas are seen as the content and context of the forms. But once we identify the Pattern that has structure exhibited under changes then we can also consider that the System also has a nucleus that persists under metamorphoses, i.e., Transmogrifications or *Trans*systematizations.

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[22] https://www.wikiwand.com/en/Schema_(Kant)

[23] Cassirer, Ernst. *The Philosophy of Symbolic Forms*. London: Yale University, 1973.

[24] Bertalanffy, Ludwig . *General System Theory: Foundations, Development, Applications*. , 2015.

[25] Kant, Immanuel. *The Critique of Judgement*. Lanham: Dancing Unicorn Books, 2017.

[26] Hegel, Georg W. F, and J B. Baillie. *The Phenomenology of Spirit (the Phenomenology of Mind)*. Adansonia Press USA, 2018. Hegel, G W. F, A V. Miller, and J N. Findlay. *Phenomenology of Spirit*. Oxford: Oxford Univ. Press, 2013.

This brings us to the point that Forms have *essences*, Patterns have *structures*, and so we need a term for the "essence" of a System which we call here its *nucleus*. It is extraordinary that Systems are not yet seen as having their on nucleus as a type of 'essential formation' specific to the system schema. Part of the reason that this is 'systemic essence' missing from the tradition is that we do not recognize the Meta-system as a proper schema within our tradition and this schema remains fragmented with many different names. A *transystematization,* as *metamorphosis,* would occur in a Meta-systemic context because the System would fundamentally or essentially change its constituents from one manifestation to another within the meta-systemic context. For instance a System might transmogrify into its dual the Anti-System going through a moment as a Non-system. To admit that there were "essences" for systems would to be to admit that Meta-systems also exist. We call the "essence" of a meta-system a *locus*. In other words, all schemas have their own "essences" which are all different from each other and thus deserve their own names for the internal relations that subsist within the various schemata. We should differentate between the General Abstract organization of a Schematic template, a *Schema*, and something that takes on that organization by calling it a *schemata*. This is like the difference made by Heidegger of ontological difference between *Being* and *beings*, or *Ontological* and *ontic*. And from a Phenomenological point of view this realization is fundamental. Phenomenology has focused on Essence Perception as its basis since Husserl. But Phenomenology must recognize that there is also Structure intuition, Nucleus intuition, and Locus intuition associated with the Pattern, System and Meta-system schemas as well as Essence perception associated with Form. From a phenomenological perspective this realization is a huge breakthrough that Romano does not even recognize. It brings back a focus on Internal Relations that had become taboo in modern philosophy since Russell and recognizes that all Schemas have associated internal relations between their features and characteristics within their organizations. Romano wants to incorporate the System and Structure into phenomenology as part of its own internal organization but he does not thematize the fact that we must move on from Essence Perception of Forms to Structure Perception of Patterns and Nucleus Perception of Systems or Locus Perception of Meta-systems. This bears on whether we recognize what Hegel calls *internal relations* within schematized things as well as *external relations* between schematized things in experience. Internal relations are between the Attributes or Properties of the thing rather than its external relations with other things. Since Russell there has been a prejudice against recognizing internal relations in Analytical Philosophy due to his rejection of the philosophy of Bradley. However, from a phenomenological point of view as established by Husserl everything in experience has both an internal and external horizon that may be explored as we become more acquainted with the thing as it appears in spacetime. The reality of a thing is substantiated when it has an infinite horizon to explore internally. The identity of a thing is substantiated when it has an infinite horizon to explore externally. The identity of a thing externally is its difference of kind plus its Haecceity. Reality outward is the projection of the Transcendent World by Dasein as discussed by Heidegger in Being and Time. Both internally and externally we find out about the truth of a thing by looking at its

relations between parts of itself internally or with other things externally. Presence occurs internally as substantiality. Presence occurs externally as our consciousness of the thing. The things of our experience are constituted through the projection of the aspects as the content of Being upon them. The fifth aspect is probably Meaning which is the target of the Intentional Morphe when if forms the content of the Hyle. Meaning internally bubbles up from the emptiness within the thing that we approach through its ultimate internal horizon. Significance externally flows from the Void outside the thing that we approach through the ultimate external horizon.

Phenomenology has focused on "essence perception" or "eidetic intuition" in its development of the characterization of things as noema. Noema are in contrast to Noesis which is the modality of consciousness by which the essence of the thing is seen. It is part of the structure of consciousness that it is intentional and that means it is projecting meaning on experience but at the same time it is receiving intuitions of the essences of the things in experience as a platform on which it is constructing this meaning inwardly[27] or significance outwardly of the thing experienced. The Intentional Morphe forms the Hyle of experience, but it is impossible to separate out these two ideal functions within experience and so something mostly intentional with a little hyle is called *noetic,* while something mostly hylic with a little intention is called *noematic*. Essences that we intuit are noematic. When we look at something we see its *noematic nucleus* within experience as its external appearance. But the internal relations within that nucleus is the essence of that thing which are a set of dynamic constraints on its attributes that perdure over time as we see the thing from multiple perspectives with always some part of it hidden to us. It is the nature of things in spacetime that they are mostly opaque to our inspection. So to get an overview of them we have to look at them from different perspectives over time. The relations between the attributes of a thing have internal relations just like different things have various external relations in extension beyond themselves with other things in our experience. Analytic Philosophy has concentrated on *extension* and have up until recently rejected *intension* which leads to possible worlds as developed by Wittgenstein in Tractatus[28] but came out of the philosophy of Leibniz but has been developed more recently by Saul Kripke[29] and David Lewis[30]. Both internal relations and external relations are Seconds (relata) in the Philosophical Principles as defined by C.S. Peirce. We are then led to ask what are the Firsts in each case. The Hyle within the Morphe produced as a Form by Intention that gives it meaning is obviously a First that is inside the Form as Content. However, we may ask what the equivalent to the Hyle outside the form in the Context it occupies and there is no obvious answer to this in Phenomenology. All we can say is that there are 'appearances' tied to the thing seen

[27] See Geode Theory of Meaning by the author. See Intratextuality: Exploring The Unconscious Of The Text -- Data Mining To Understand The Sources In The Unconscious, page 20

[28] Wittgenstein, Ludwig, David Pears, and B F. McGuinness. *Tractatus Logico-Philosophicus*. Oxfordshire, England: Routledge, 2014.

[29] Kripke, Saul A. *Naming and Necessity*. Cape Town: Wiley, 2015.

[30] Lewis, David K. *On the Plurality of Worlds*. Malden (Mass.: Blackwell Publishers, 2013. Lewis, David. *Counterfactuals*. Hoboken: Wiley, 2013. Lewis, David K. *Philosophical Papers: Vol. 1*. New York: Oxford University Press, 1983. Lewis, David K. *Papers in Philosophical Logic*. Cambridge Cambridge University Press, 1998

externally that seems to cloak it and hide its reality as a 'noumena' from us. Appearances must be the external hyle that operate as Firsts in our experience. These external Hyle appear as sensations to perception. So internal Firsts as hyle are contents of Form and external hyle as appearances of formed content are discovered to be sensations within our perception of the object and from those perceptions we infer the relations that hold between those objects. We must also infer the relations between the various attributes of the thing we perceive by which we hypothesize the characteristics of its essence. We can see that phenomenology is completely adapted to the Form schema because we are talking about an intentional *morphe* positing the object and organizing its content *hyle* in our experience to produce meaning we might project on the substance of an object. What has not yet happened in any organized way is to scale this phenomenological story up to cover different schemas and their relations both internal and external but also focusing on their internal and external hyle and how those are experienced when we go beyond the safe territory of the form schema and its projection on the world of our experience.

Beyond the Limit
- **Source**
- **Root**

Supra-Rational Limit – Nous of the Numinous

Non-representable intelligibles – Sophia of Virtues
- **Good**
- **Fate**

----------Emptiness nondual----------

Representable intelligibles -- Episteme of Science – Present-at-hand (Pure Being)
- **Order**
- **Right**

========Manifestation nondual=====

Grounded opinion/appearance – Techne of Poiesis – Ready-to-hand (Process Being)
- **Truth**
- **Reality**

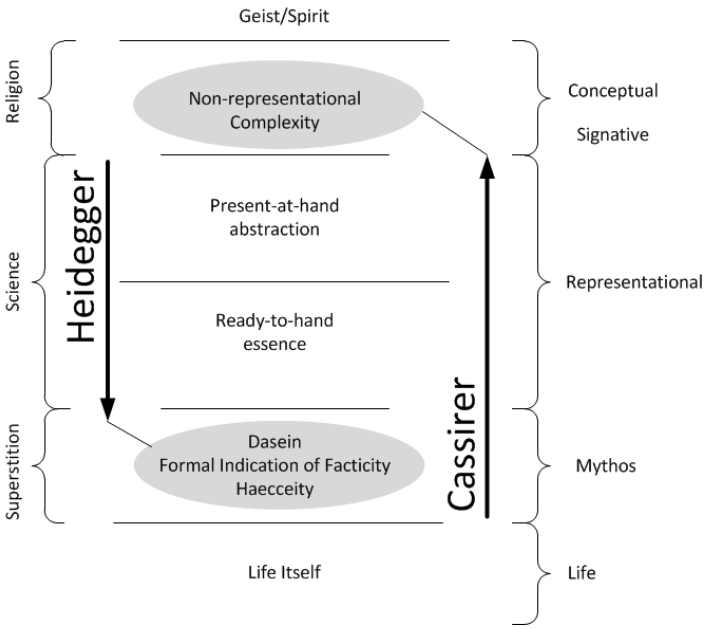
----------Void nondual----------

Ungrounded opinion/appearance – Phroesis of Praxis – Dasein (Monad)
- **Identity**
- **Presence**

Mixture Limit – Metis (trickery)
- **Contradiction – Process Being**
- **Paradox – Hyper Being**
- **Absurdity – Wild Being**
- **Impossibility – Ultra Being**

Deleuze in Difference and Repetition brings up the First that is prior to the Second of Internal Relations and calls them Internal Difference. Internal Difference is seen as Difference-in-itself beyond its relations of difference from other things or properties. Deleuze sees Internal Difference as hierarchical and related to discontinuities within those hierarchies. The formulation of Internal Difference is a breakthrough which allows us to formulate the idea of the Orthogonal Centering Dialectic. We can consider that the processing of Difference starts with External Difference and then uses Nihilistic duals that are orthogonal to each other to find the center which is the axis by which these duals related to each other. The Duals themselves form a series of meta-levels. At the first level there is a nihilistic difference between say Set and Mass ways of modeling difference. Sets have too much difference between their particulars. Masses have too much identity between their instances. But then at the Second meta-

level of nihilistic duality we see the relation between Being and Becoming in some form like the difference between Essence and Emergent Meta-systems that relate to the visions of Parmenides and Heraclitus with respect to the meaning of Being. If we go up to the Third meta-level we see the difference between the Esoteric kinds of Being which are the Hyper Being of Differance and Wild Being. If we go up to the fourth meta-level of artificial nihilistic extremes we get the difference between the singularity of Ultra Being and the ultimate transcendental horizon of the world. But normally we only need two meta-levels to identify the center of that is the axis that relates these two meta-levels of nihilistic duality. At that central axis we find Internal Difference that normally is some kind of deception where what is outside and what is inside do not match. Once we know that internal difference we can contrast it with the beginning external difference and then attempt to approximate nondual difference. It should be noted that the Divided Line of Plato and Aristotle can be seen as an example of the Internal Centering Dialectic. All we need to do is to make the central line at right angles to the lines that divide Ratio and Doxa to form an **H** where the division of Doxa is Void and the division of Ratio is Emptiness such that the cross-beam of the **H** is the utterly nondual Manifestation. Then one ether side of this cross Beam we can see Being and Becoming as duals at the second nihilistic level. The first level differentiates between Phornesis related to Dasein and Sophia related to Hiersein of Rilke. Heidegger ignores Hiersein and only includes Dasein as an external existential. He makes the error of ignoring the internal existential which was explored instead by Cassirer.



Once we make the line of Manifestation that is the central crossing line dividing Ratio from Doxa into an orthogonal line connecting in an **H** emptiness that splits Ratio and Void that splits Doxa then we can see that the nihilistic duals in meta-levels higher that that merely extend the difference to Hyper Being toward the Transcendental World horizon on the one hand and to Wild Being toward the singularity of Ultra

Being on the other hand. Thus essentially the Divided Line of Plato and Aristotle is an example of the Orthogonal Centering Dialectic which is the means by which the aspects of Being within Doxa are transmogrified into the nonduals of Being within Ratio.

When leave the level of Form we go down to the Pattern schema we recognize that the contents are themselves organized into structures beyond their encapsulation by forms. When we go up to the System schema we realize that forms collect together in various aggregates some of which may be considered a system. Those aggregates that can be called Systems will have a nucleus of their own internal relations that we discover when we explore their internal horizon. And we will see that by nucleus intuition. In fact, we can perhaps say that it is by considering a given thing and the possible perspectives on it as we move around it, then we are treating it systematically in our behavior and that is how we posit its *noematic nucleus*. In this case the nucleus of the thing derives its nature from its systematic exploration. And thus, we can derive the term for the 'nucleus of the system' as a whole from the term as used in Phenomenology for the externally viewed object seen from multiple perspectives as a 'noematic nucleus', such is the nesting of Form within the System as a figure on the background of the gestalt. Similarly, Systems are seen within Meta-systems and Meta-systems have their own internal horizon called a *locus*. We see the locus of the meta-system by a locus intuition that gives us insight into the arrangement of its characteristics as an environment for the System. The Locus of a Meta-system and the Nucleus of a System have to be different because their organizations are fundamentally different. The System is based on the continuity of the boundary or its ground and is unified and totalized in relation to that continuity. The Meta-system is based on discontinuity which shatter and fragment it and in relation to its horizon it is disunified and detotalized. It is a field which has niches for the systems it contains. It has sources that generate the systems within it, and then these enter the Arena of the Meta-systemic field through points of origin and leave by sinks returning to their source. The Arena has a boundary that is the System Boundary on the one side and the Horizon of the panorama of the fieldscape that can be seen from the System which provides the OpenScape that organizes the ecosystem that supports the system in its niche. The Arena is broken into a patchwork of discontinuous regions within the overall fieldscape. The Organization of the Meta-systemic field is dis-organized and disunited as well as discontinuous and de-totalized from the point of view of a System schema that is organized, continuous, unified and totalized. The characteristics of the field is based on its locus of complementary opposites that are disconnected from each other that constitute the characteristics and features of the Meta-system. On the other hand, the System has a nucleus that continually asserts its unity and totality within its boundary. In this case the nucleus is made up of the external relations between the forms within the system as different kinds of objects that make it up. These external relations between the different kinds of forms becomes the internal relations as captured by the nucleus of the system. So in a way the structure, essence, nucleus, and locus of these proximal schemas mediate between each pair of adjacent schemas. Structure mediates between content and form and is the reconciliation that Hegel called for between

form and content. Essence mediates between the Form and the System to the extent that the Form is part of the system and adapted to it. The nucleus mediates between System and Meta-system in as much as the system has internalized relations between its elements which become clear in its interaction with the various environments in which it finds itself immersed. The Loci mediates between the Meta-system and the Domain to the extent that meta-systems are different environments that may be experienced by moving the points of view on things within spacetime. Meta-systems have their own internal organization that is based on the ordering of independent complementarities within its Arena. But from an external point of view this allows us to see different meta-systems within a given domain. The Domain looks across and takes into account the various possible meta-system changes that are part of a Mission from some rigorously coordinated and disciplined set of perspectives that are standardized.

We can imagine seeing these various "essences" of different schemas just as easily as we see the essences of forms within Phenomenology. But Phenomenology has never turned itself into a Domain which applies to different schemas with different kinds of "essences" to be perceived. If we adapt Phenomenology to seeing schemas then it would become more robust as an approach to existence because it would not be one-sidedly always positing the Form Schema that is ubiquitous in the Western tradition. Rather than introducing Structure and System into Phenomenology as internal differentiation of the discipline we are suggesting that Phenomenology become cognizant of the various schemas that appear within the entities surveyed by phenomenology. Using System and Structure to organize phenomenology itself is inevitable, but first we must be able to see the phenomena of schematization itself underlying our own experience through the development of General Schemas Theory and its application to Phenomenology.

The way we check the S-prime hypothesis is through Phenomenology where we look at the schematic organization of experience and attempt to see the schemas in action within our experience. The S-prime hypothesis is restrictive through its connection to dimensionality and we can test that restriction to see if it holds in actual experience. And so that is what was done during the research that led to the Emergent Design[31] dissertation (UniSA 2009) and before that[32] when the subject was just about Schemas Theory and not linking it yet to the process of Architectural Design[33]. Schemas are what we use to do design. We draw on the schemas to obtain the components that we create to embody the design. Schemas are the *material* for design in the sense used by Hilary Lawson in Closure. So there is a natural connection between the schemas and design. But in terms of just studying the schemas the effort undertaken during the dissertation research was to look at the S-prime hypothesis and to see if one could find any violations of it that would invalidate the hypothesis.

[31] https://www.academia.edu/34831961/EMERGENT_DESIGN
[32] 'General Schemas Theory: A New Basis for Systems Engineering Practice' Draft for Systems Science Handbook, Springer, Unpublished Article by the author
[33] https://independent.academia.edu/KentPalmer/Foundations-of-Systems-Architecture-Design

Different rules were tried with more schemas, but they ended up being too complex. Gaps between schemas were looked for in actual experience. Other schemas not covered were investigated. Anomalies like 'three dimensional patterns' and 'one dimensional systems' now called *ersatz* were studied. During this time when I tried to invalidate the hypothesis myself, I did not find anything that was a certain basis for claiming the invalidation of the hypothesis. But I hope others will keep looking for something that might invalidate the hypothesis, so we can learn more about the schemas through that process of trying to find counter-evidence to the hypothesis. But for now, for me, the hypothesis stands, and I continue to explore it because it is a platform for studying other phenomena related to schematism that underlies all our experience at a fundamental level.