

THE FUTURE AND PAST OF GENERAL SCHEMAS THEORY

Chapter 12 of the Anti-thesis

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Summary:

None yet.

The Place of General Schemas Theory in the broad scheme of things.

General Schemas Theory attempts to comprehend all the various schemas that have been developed by the Western Scientific and Philosophical Tradition and in fact other traditions as well. We have made a selection of these which are well developed and have treated them all

within the context of the entire Emergent Ontological Hierarchy. Of course, there are perhaps other schemas that we have not treated. We do not consider this set canonical. But only a first attempt to see if it is possible at this time to define a set of General Schemas that work together and make up a whole when taken together. There is no agreement on what a "schema" is and we have compared our view to that of Mark Johnson and attempted to suggest that perhaps his image schemata are somehow the means by which the higher level schemas are invented, constructed and maintained. In order to explore the origin of schemas we would have to return to Kant and the difference between his two editions of the Critique of Pure Reason and Heidegger's interpretation of the Transcendental Imagination which plays significantly different roles in the two Critiques. We would want to put this into the context of Husserl's work and see how Merleau-Ponty's reworking of Phenomenology might be relevant. Also the work of Deleuze should be consulted. Producing a philosophy of schematicism would be a major undertaking. Only Umberto Eco's Kant and the Platapus comes close to a review of this problem area that we know of at this point. The ultimate locus classicus of the schemas is the theory of ideal sources of Plato. We have attempted to suggest how the schemas fit into his logocentric philosophy of presence in the earlier chapters and in other works. Nietzsche, Heidegger and Deleuze as well as other philosophers in the Western tradition have attempted to overturn the philosophy of presence while still remaining in its orbit. We have attempted to suggest how it is possible to escape that orbit out of Being into

Existence. More work needs to be done to show how schematicism fits into this overall framework of the Kinds of Being and Existence as well as the Aspects of Being and how Being and Existence in general relate to Manifestation, i.e. the next deeper non-dual beyond Existence and Being. Because the schemas themselves are non-dual in nature they only really make sense with respect to this deeper background of philosophical exploration. The schemas exist as non-dual between the physis and the logos in a different way than the nomos (order), which is to say they are non-dual between physis as ontic and logos as ontological. They mediate between us and the noumena. We project the schemas as spacetime articulations onto the noumena and note the differences between our projections and how they turn out as they are mixed with the hyle of the qualia in experience. As Kant says they mediate between cognitive abstraction and concrete experience. We only find out about our projection of the schemas after the fact and mostly by seeing how they appear in various disciplines. There is a certain eerie resemblance between the schemas as they appear in different disciplines. In a way they are opposite what Deleuze talks about in Difference and Repetition. Schemas are similarities and resemblances, i.e. they are incarnations of the Same in representations. The schemas play off of the differences that appear in the various disciplines. It is this interaction that allows us to know the world as something familiar yet also something unexpected as we see how the media of the schemas are articulated differently in different disciplines views of phenomena. In fact, thinking of the schemas as media might help us to

understand it better. What we are saying is that we have a hierarchy of different conceptual media which are fitted to our understanding. Almost any kind of phenomena can express itself through these various media. As they are so articulated in the media they take on the form of the media. The next step is to realize that this hierarchy of media is actually the structure of consciousness itself in some sense. We are well aware of external media, like paper, television, radio, the internet, virtual reality, etc. What we are unaware of is internal media of understanding which is just as important. We don't receive anything except through this internal media which acts as a priori templates of understanding. We don't notice them except when our expectations are not met. We use that fact to discover the nature of ontic physis beyond our kenning which we call Science. But most of our conceptualization occurs within the ontological hierarchy of the logos predetermined by the schemas. Understanding the nature of these internal media is important because it helps us to recognize when our expectations about phenomena articulated in the media are not met and thus gives us insight into emergent phenomena. In some ways the exploration of the nature of the schemas will never cease because we have really no idea how complex and nuanced they are until we meet with violations of their integrity in specific phenomena. Slowly these violations begin to make common sense and we subtly change the media of the schemas and develop new intuitions which then again express themselves as common sense or good sense¹. Because the schemas are invisible to us, because

¹ See Deleuze D&R

we project them on everything before we know it ourselves, i.e. they are subconscious or unconscious processes it is very difficult to delimit them definitively. Yet our whole relation to phenomena we explore in science and things we design are mediated through them. Thus they are of interest to the Systems Theorist who discovers that the horizon of his theory has been greatly expanded to all the schemas. And they should be of interest to the practicing System Engineer when he finds that the design templates that he has to work with are greatly expanded from just three to at least ten. Schemas are in many ways the basis of all practical reason which seeks to understand the world we have built. In engineering we are seeking to build systems that do not violate these fundamental building blocks of cognition. Human Engineering is in many ways mostly the application of Schemas to the things we build. We think of them as systems and the users think of them as systems. But our range for design templates has been expanded from the Small to the Large as we consider the schemas at the extremes as well as those at the center. The fact that the various schemas work together in the many ways we have mentioned in these studies is the most exciting facet of the study of General Schemas Theory. Interactions that we had never dreamed of before can be explored now that we have some idea how the whole sequence of schemas relate to one another. That whole sequence has some odd properties which are neither those of representation nor of repetition as Deleuze describes these extremes. The schemas are not representations because they are empty of content except with respect to some case of application. The schemas are not

repetitions because each one is an emergent level of organization in the hierarchy. Yet they are constructed by conjunction of lower level schemas or adjacent schematic levels. The schemas are strange beasts indeed, and they are inside us in ways we do not perceive except in terms of their objectifications in universes of discourse of the scientific and philosophical tradition in culture. So this is why they need to be a special realm of study, because we need to ferret them out of ourselves. They are useful in terms of setting expectations of design of artifacts and in terms of isolating violations of expectations that might tell us something new about the world. So General Schemas Theory is a valid discipline in its own right, as Klir says orthogonal to all the special disciplines that use schemas unthinkingly and imperceptibly. The question is not so much about the validity of General Schemas Theory as a discipline in its own right, but more concerning how such a crucial discipline should attempt to develop itself. The point is that the object of the discipline is intertwined with the structure of the worldview itself. It cannot be approached merely as a scientific discipline but must be approached philosophically as well. This calls for a greater sophistication not just among systems theorists but with respect to systems engineers as well. This will be the source of a great deal of resistance I am sure. Somehow the benefits of this higher level of sophistication needs to be demonstrated.

Of course, General Schemas Theory does not only need to be comprehended in the context of a philosophical sophistication with respect to its own grounds, but also it needs to be understood in relation to Special Schemas Theory and Emergent Meta-schemas Theory. These are each topics of other projected studies of this research. Special Schemas Theory looks into the strange nature of Special System. Emergent Meta-Schemas Theory looks into the combination of Special Systems with the normal system to produce the Emergent Meta-system. Up to this point we have always posited that the special systems only exist between the system and meta-systems layers of the ontological emergent hierarchy. But we need to try out the hypothesis that analogous structures exist between each of the layers of the ontological hierarchy. In other words the special systems are special schemas and that they can exist as intermediaries between each of the levels in the ontological hierarchy, and that the Emergent Meta-schemas may exist as a combination of the lower adjacent schema and the special schemas for each level of the hierarchy. This means that the ontological hierarchy would as a whole take on the form of a chain of Emergent Meta-schemas. This is a new idea about the nature of the ontological hierarchy as a whole. It must be explored. For instance between world and Kosmos are there special worlds related to the dissipative, autopoietic and reflexive special schemas which together with the world schema produces the Emergent Meta-Schema of the Kosmos. This is saying that the world is analogous to a system and that the kosmos is analogous to a meta-system, and between them are special schemas that

are analogous to the special systems. Whether such special schemas exist and whether this analogy holds is a big question that needs to be carefully explored. But if this were the case it would radically change the nature of the ontological hierarchy and increase the number of schemas we need to study in our General Schemas Theory. But the beginning of this exploration would be to look at the nature of the special systems as schemas and at the Emergent Meta-system as a meta-schema. There are many things about these strange and unique structures that are not well understood. We are just lucky that some philosophers have given us models and prototypes to attempt to understand these strange special schemas and meta-schemas. Other parts of this research project will attempt to approach furthering and understanding of this horizon of our knowledge. We will start with the Special Systems and the Emergent Meta-system and attempt to generalize them.

The Cave of the Mind

Another completely different direction of study would be to find examples of the interplay between the various schemas in our culture or other cultures. By looking at these concrete historical instances it might be possible to gain insight into the interaction of the schemas in the production of cultural artifacts and their variation across cultures. Also understanding how children use schemas and how they evolve as we move from childhood toward adulthood would be useful. But at this point the best way to inaugurate such a study of schemas is to attempt to push back as far into history as possible and attempt to see the

schemas in action in the oldest possible cultural setting we can find. And we are very fortunate to have the example of the Prehistoric Cave paintings of Europe to work from. A recent book called The Mind in the Cave attempts to put these cave paintings in a broader perspective of the structure of consciousness and the expression of that structure in altered states of consciousness through shamanism. Without going into the altered states of consciousness we could look at the cave paintings in terms of the schemas that they exhibit. In that way another aspect of the mind might become apparent that shows up in these very early artifacts that allow us to relate to our own human past in surprising and unexpected ways. In this study we will concentrate on the Cave in the Sea because the study of that cave is the most comprehensive in the ways necessary for our purposes. However, we will take all the known caves into consideration to the extent it is possible in such a short exploration. Mainly what we are trying to do here is show that historical cultural evidence can be used to adduce the presence of the schemas and their interaction within particular historical and cultural settings. Mainly what we are trying to show is that the schemas have a very long cultural history and that some of the earliest artifacts that exist exhibit their presence. And it is because we share these schemas with those early human hunter gatherer communities we can understand and recognize what they have done with a surprising amount of insight which is quite unexpected. When we look at the cave paintings what strikes us is that we can distinguish between the patterns based on repetition and the forms based on representation very easily. Looking at these specific

examples we can easily see what Deleuze says is correct, that representations carry concepts and repetitions do not. Because when we look at the representations of animals we get the idea of the kind of animal being represented whereas when we look at the handprints or other marks that are repeated to create patterns we do not know what they painters were trying to signify by their markings, rather we are struck by the selection criteria of the painters as they distributed the patterns and forms around the cave. Each cave has a different distribution of forms and patterns onto the unique landscapes of the caves. We can begin to see these distributions as systems in some cases but not in others. We can begin to see the whole cave as a meta-system or an environment, and we can wonder how these artifacts in these environments relate to higher level schemas like the domain, world, kosmos and pluriverse, not to mention the lowest level which are monad and facet. Lewis-Williams makes the claim that the cave face is the membrane between the world of the humans and the world of the powers of nature that they attempted to contact through their shamanic exercises, and that they saw the various powers as existing on the other side of the wall, so that the meta-system of the cave is doubled into another environment within the cave, on the other side of the looking glass so to speak, to produce the domain that consists of the two meta-systems. This is a novel and interesting conjecture especially when supported by ethnographic evidence about the nature of shamanism seen as a worldwide cultural phenomena. We are sure that they had a world as we do probably inhabited by powers of some kind that they considered to need placating in

order for their hunts to go well. But if we go beyond the meta-system of the cave we immediately enter the realm of speculation. At the level of the monad we can look at the colors that they used in their paintings. These colors had to be collected and brought into the cave. Each pigment was a different kind of monadic structure for them. But to look beyond that into the facet level is also to enter the realm of speculation. So we are pretty much limited to the spectrum from monad to meta-system in our reconstruction of the schematization of the caves by early man. But we can look carefully at the artifacts and see how those schemas fit the data of the caves. It gives us an interesting lesson about the concrete nature of schematization and how that plays into our preconceptions about it.

The monads are the colors that were used by the painters. The patterns appear as scratches, finger tracings, handprints, and paintings on rock surfaces. Sometimes these patterns give way to representations through the use of outlines and filled in bodies of animals or other figures. Many times the figures are randomly placed but sometimes they form a system within the meta-system of the cave environment. We think of them as forming a system when the figures are in some way configured in relation to each other. It is possible to look in some depth at exactly what those arrangements are, and many systems can be projected. But when we look at the archeological evidence we are in some sense projecting these expected schemas onto the artifacts we find. What we find amazing is how the cave paintings satisfy our expectations beyond our wildest dreams given such a long time between those

who created them and ourselves. The ascetics of the forms of the animals depicted in the caves are overwhelming. Our sense of the humanity of the painters is extreme especially when we see the handprints which seem like signatures to us. So this is an excellent example of how our projection of schemas onto the archeological finds seem to be echoed in the finds themselves so that we feel that the painters who created the animals and other patterns were like us, and that at least means projecting the same schemas. The question is whether if we look carefully at the evidence whether that first blush intuition is confirmed.

One thing that is so satisfying about this example is that it relates to Plato's analogy of the Cave which is one of the central scenes where his concept of the sources is put forward in the Republic. So we can go directly from the archeological remains of great antiquity to a consideration of one of the primal scenes of our culture with regard to the schemas. The sources of Plato can be interpreted in a mass rather than a count like way. Thus we can see the various sources as pervading things giving them their basis in the schemas. This was suggested by X in The Discovery of Things who said that it was Aristotle that inaugurated our count like obsession with representation and that the Pre-Aristotelians were repetition oriented. When you take this perspective into account and apply it to Plato's image of the Cave, in which logocentrism of presence is inaugurated, and we consider in this light the Cave Paintings of prehistoric man. Then there is an interesting mix of elements to explore. The cave is of course associated with the unconscious. In the case of The Cave

Beneath the Sea², i.e. Cosquer Cave, this is reinforced because the entrance to the cave is itself under water and was discovered by divers. Thus when we explore these paintings we are not just going back deep into history, but deep underground and in at least this case deep under water, where the water is associated with the unconscious. So there is a triple delving into a certain depth that Deleuze calls the pure past, i.e. the past of myth and the archetypal unconscious. One of the questions we have when we enter this realm of the unconscious, i.e. what was lost in oblivion, is whether the schemas hold up in this ancient realm. That is the key for us. If the schemas hold up then they act as a bridge across time, i.e. we apprehend the images as they did then, it is merely our interpretation that is different, as we try to understand our ancestors. This is the key question that this brief look at the Prehistoric Cave paintings is attempting to answer.

When we look at the images from the Cosquer cave we see several point that stand out. First the wide variety of images of different types which are spread throughout the cave makes this particular site a treasure trove. The tables on page 123 capture and summarize this variety. Notice that 74% of the images are engraved while 25% are painted. There is a fundamental difference between these techniques. One scrapes away the rock in lines while the other adds to the rock pigments. In the one case the rock itself is the substance of the work while in the other case the rock is merely a medium or substrate for the

work. But in each case the animals are indicated by outlines that suggest their form. In the case of engraving only these outlines exist while with painting the painting techniques fill in some of the content of the outline to give the animal more articulation and definition within the outline. We have discussed the fact that pattern spans two dimensions as does form. Pattern can be one dimensional or two, while Form can be two dimensional or three. Pattern and form meet at the level of two dimensionality. All these outline images of animals are of two dimensional forms. In total there are eighty seven such images at Cosquer Cave. The tables tell what the images look like in general. Forty four percent are complete while thirty three percent are just the forequarters of the animal, the rest are other views. Fourty three percent are on the ceilings while thirty six percent are on the walls, the rest are placed somewhere else. Sixty one percent are facing left while thirty three percent are facing right and the others are facing either frontways or were not recorded. When we move from form to pattern then we see finger tracings. Beyond the finger tracings there are engraving marks in patterns and also Hand Prints. Hand prints are thought to be made by spitting paint though a straw at the hand leaving the negative impression of the hand, but in some cases the hand is as a whole covered in paint and placed on the wall to leave the hand print. An interesting thing about the hand prints are the fact that some fingers are tucked under as if to make a sign. On page 77 is a table that sows that there are ten whole left hands and three whole right hands. Other hands have their fingers tucked under to produce a sign. One right and one left hand have all the

² Clottes, J. & Courtin, J.; The Cave beneath the Sea: Paleolithic images at Cosquer; Harry N Abrams Inc Publisher 1996

fingers folded and the other examples are of various fingers folded on the left hand. Hand prints and engraved lines or finger tracings may invade the representations of forms. The finger outlines are a curious intermediary in which the actual form of the hand is used to produce an inverted form on the rock of a live three dimensional human being's form. Sometimes the engraving marks attempt to erase the hand prints. But then these are combined to make a pattern. Some patterns are actually in the form of signs. We have noted before that letters are non-dual between representation and repetition. Some of the signs may be approaching this non-duality. Some of the signs in the Cosquer cave appear to be geometric as well. One key sign in this instance is the killed man which seems to be a theme that appears in the various caves. In this cave the figure is a bare outline of what appears to be a human figure which is overlain with a canceling barbed line that could represent a weapon. The killed man suggests the entire human body having been killed or wounded. Thus there is quite a variety of different types of artifacts in the cave and some of them seem to be patterns like the finger tracings and some of the engravings. These patterns at time reduce to signs when they take on a geometrical appearance. Lines are in effect patterns in themselves. The variety of the hyle at each point in the line gives a very primitive pattern. But then pattern opens up into two dimensions and differs from representations in two dimensions in that it does not have an essence as is consistent with repetition according to Deleuze. Forms give us an idea of the referent, say the animal or human that is being suggested by the outlines, while patterns leave us wondering about the

referent. It is this ability to refer by the similarity of the essence of the thing and the representation that gives greater depth to the representations of forms that patterns do not evoke. Signs on the other hand send us up into an ever greater level of meaning and reference. For instance, the killed man. We see it in many caves and thus we are sure that it refers to something like a myth, god, hero or some other mytheme perhaps related to shamanism, or the hunter gatherer culture. Signs eventually coalesce into writing which sometimes can be deciphered so that we can actually read the meanings of the representations as we have for the Sumerians, Egyptians and the writers of linear B from Mycene and later Minoa. But this ability to signify meaning in language only occurs at the system level. Languages and Games are the primary representatives of the system schema. In the cave we can see that the system level is fragmented somewhat and is not orchestrated except in limited ways. We think there may be some meaning in the placement of the forms and patterns but we are not sure that they were not like graffiti just random. But what I want to suggest is that the interaction of the schemas in the cave is far more interesting than we might imagine. There are intermediary instances, i.e. anomalous cases that I think say a lot about how the schemas interacted with each other for these early people. In a way to see that interaction one must consider what they did not do that we might have done. And we must consider how the environment of the cave interacting with their minds produced particular responses some of which are unexpected. For instance, there are the hand prints which are outlines of three dimensional forms

projected on the rock walls by spitting paint out of a straw across the hand. This is an unusual way to make a hand print. But it is similar to the way that the paintings of animals are done and so there is a connection between outlining a real form and outlining a represented animal form. They did not bring the animal into the cave and use its real outline, they only used their own real outline. We see it as almost a singiture which says that they were human, but then the hand prints are making some sort of sign with the tucked in fingers which is an unusual gesture. We see that as almost a sign like the geometrical signs we see in the cave produced by engraving. But then engraving cuts across and erases the hands. Hands on the other hand print over finger trails as do the engravings of horses. See what I mean there is in the cave an odd interaction between schemas that is very specific. If we look at other caves we see that sometimes the animal forms are partially suggested by the rock formations in the cave themselves. In other cases there are clay forms of animals in which the tow dimensional forms have risen up out of the rock face to be created in three dimensional form. All of this suggests that as Lewis-Williams says that there was some sort of interaction between the cave environment and the consciousness of the minds of the ancients in the cave. They were perhaps hallucinating and then they were interacting with the halucinations they saw which perhaps they added to by engraving or painting. We know that sensory depravation causes hallucinations and we know that these hallucinations can become very strong in Shamanistic experience. The whole ambience of the cave as a foreign territory that can only

be accessed by the invention of lamps must be taken into account. Lamps create points of view from which the light emanates which may be different from that of the eye viewing the scene. We know that some forms in the cave only look like animals from odd angles and they would have had to have the light just so and the eye just so to see the form that looked like the animals. Our own hypothesis is that Hunter Gatherers dreamed of animals the way we dream of humans. If your interaction is primarily with animals that you will project imaginary animals more often than you will project imaginary humans. As your interaction becomes more with humans than animals you will go to the other extreme and see mostly humans in your dreams and an ocasional animal. In the intermediary stage such as existed in Egypt and Sumeria one will project partially human and partially animal figures. This intermediary position had only just begun with the Hunter Gatherers in the cave, so we can see a few instances where there are humans appearing to have human heads, while when we get to sumeria or egypt there are many human figures with animal heads. This mixture between human and animals shows that the powers of nature is crossing the boundary into the human arena quite freely and slowly the human form is isolated as we see in the Greek culture which pictures their gods with fully human perfected forms. Thus shamanism is part of the answer as Lewis-Williams suggests, i.e. the interaction with powers that reveal themselves in altered states of consciousness such as might have been evoked by the lack of stimulation of the cave environment which causes hallucinations in the humans who entered

the caves and put out their candles to meditate in the quiet and dark. But also there was an interaction with the cave as the medium on which those hallucinations were seen and it is as if the ancients wanted to draw out of the rock the hallucinated forms and patterns they saw. Lewis-Williams notes that laboratory experiments have identified four phases to the hallucination process. First there are random patterns that are proto-geometrical, then there are various partial objects that appear out of those proto-geometrical patterns that are in continuous flux. Then there is the whirlpool or tunnel with the light at the end. And finally there is the appearance of complete hallucinations such as a human body with animal head. Now if we relate these to the meta-levels of Being we would consider the first stage as Wild Being in which there are chaotic patterns. Then the second stage with partial forms arising out of the chaos would be Hyper Being. Next the tunnel or whirlpool would be Process Being. Finally the full fledged hallucination of the type that appear completely real such as appear just before or after sleep called hypnogogic is an expression of Pure Being. The hypnogogic hallucinations are illusory continuities which talk and interact with us as beings from another world. We get to them by undergoing the process of transformation of moving through the tunnel of light that is the rabbit hole that leads to that other world. Alice falls down that rabbit hole when she visits wonderland. Wild Being is the level where one produces swarming geometrical patterns and Hyper Being is the partial appearance of forms from the Wild fluxes of qualia. If we see the stages of consciousness as related to the travel through the various levels of Being then

it makes more sense that the caves invoked an exploration of the levels of consciousness in the ancients. Their response to those altered states of consciousness brought out the nature of the schemas as they were expressed in them because the schemas are the medium of the projection both in hallucination and in perception. But the schemas are hidden in perception whereas they become visible themselves in the hallucination. If you are hallucinating forms of animals from your experience with them in terms of hunting then you might trace them out with sharp points into the rock walls. You might run your hands over the cave surface to see if they are real. You might want to go beyond merely outlining them and instead attempt to draw their outlines and fill those drawn outlines with suggestion of the interior qualities of their bodies. You might want to raise them up ultimately as three dimensional forms in clay as we see in some caves. All along there is an interaction of the logos of the images and the physis of the caves surfaces which serve as medium either of the vision itself, or to carve into, or to paint on. This medium is active because we see these ancients using the forms of the cave itself to suggest the outlines of the animals which the artist completes. Since these are sometimes in odd places we can see that the ancients searched for these precise points of view from which the animal suggestions are seen, as if they were seeing forms in clouds, but here the cloud-like formations are static being the natural build up and erosion of waters running through the caves which give more permanent structures on which to project and on which to draw. This interaction between the physis of the cave surfaces and logos of hallucinations

is very significant. Here the magma of the cave produced by natural processes of calcination build up and erosion is brought into the human world as a medium for the projection of hallucinations of the animals that make the dominant feature of the environment to which they are oriented to assure their survival. They hallucinate the animals that concern them most in their daily lives. But sometimes those hallucinations combine partially humans and animals. And so they see these powers of nature as partially human partially animal. Here the humans may be seen as the meta-system set up as a trap in the hunt within which the animals as systems might be engaged. Or the animal environment with all its variety may be seen as the meta-system within which the humans as key species from their own point of view needs to maintain viability. So from one point of view the human capabilities are seen as emergent while from the other viewpoint it is the animals as the prey can be seen as emergent on the background of the hunting environment. It is difficult to say which was the system and which was the meta-system. And in the cave it could be that these two views came into interaction with each other, because there the humans were projecting the animals, but they were projected in their full variety that they had within the environment to the different parts of the cave. On the other hand the human was seen as a system within the context of the interaction with the animals as the killed man. The hunting was difficult and the human had to become completely without ego to merge with the animals and adapt completely to their lives in order to hunt them successfully. The killed man could stand for the dynamic clinging that was necessary for the hunter

to successfully adapt himself to roming animals. Dynamic clinging such as that which is seen in the cowboy on the bucking bronco eventually gives way to Static clinging which is seen in Agricultural and Pastoral Societies. The killed man could have been a recognition that the human to adapt needed to become completely one to the animal and absorb into the animal habits and animal ways of life thus negating human ways of life in order to successfully hunt these animals in their herds though the cooperative pack of human hunters. It is hard to know exactly what causes these ancestors to focus on the killed man as a symbol. But we assume that it is some sort of shamanistic symbol. But what we can see clearly is the odd interaction of the schemas that comes out in the process of the hallucination and its projection on the cave walls. Projected hallucinations are outlined on the walls, then they are painted on the walls and finally in a few instances ceramic or mud effigies of animals are raised up into three dimensional form out of the walls. But this process of raising up forms which become clearer as we move up the levels of Being, also interacts with the geometrical patterns that appear in Wild and Process Being levels. There is interacion with the walls of the cave by finger tracings, hand prints, erasure of forms by etching over them, and production of dots and other signs either alone or in repetitions. The repetitious interaction with the cave walls is just as important as the production of representations of the hallucinations. And in both these types of interaction the walls themselves play a role, giving different surfaces and surface articulations in different parts of the cave, and also suggesting forms or

suggesting patterns that are then taken up and articulated by these ancients as the substrate to their articulation of their hallucinations and the forms and patterns that are drawn from the fecund source of these hallucinations.

We want to suggest that the same is true today. The physus interacts with the projections of the logos which implicitly brings with it the schemas and many times it is anomalies within the physus that becomes the center of attention, i.e. how the physus overflows the projection of the schemas. This overflow becomes the focus of science that seeks to see beyond the schemas that are naturally projected but do not tell us much about the nature of existence. There is an adaptive process here in which the schemas are clarified as we see what in the physus goes beyond the logos and thus learn a little about the things themselves through the way the phenomena escapes the physus. When we take out own form and paint its images either negatively or positively on the cave walls we are noticing the difference between our own real three dimensional forms and the representations that we paint. When we create a pattern of hands on the wall then we are seeing how forms may be dominated by pattern schema rather than the more usual other way around in which pattern fills up form. When we cut an outline of an animal on a wall the wall itself supplies the content for the two dimensional outline form. But we can also bring in materials that allow us to color in the painted outlines of forms. Thus we discover the difference between qualia that are natural and in situ from quali that we make ourselves. When we make the pigments ourselves we are essentially constituting

the monadic level of qualia rather than just accepting it from the environment as we do in etching. So we learn that the monadic level of qualia can be artificially created and does not have to be accepted from the environment. We thus learn that our ability to project monads beyond the pattern schema is possible and our experience of the schemas become expanded. A similar thing happens with the domain level. We can speculate that they saw the cave surface as a membrane between themselves and the powers of nature. But the fact that the cave is lit with lamps causes viewpoints to be constituted that emulates the domain level of schema. You cannot be where the light is. The light has a view and you have a view and these two views interact with the cave. So just as we can simulate the monadic level by bringing in paint colors we can simulate the domain level by the lights in the cave. We know there is another world beyond the cave. So that by moving into and outside the cave we bring into view the idea of a world is made up of the environment beyond the cave and that within the cave. The two environments produce a domain. And by projecting powers within the earth and within the sky we bring these four environments together into our concept of the world make up of mortals and immortals between heaven and earth. The cave experience shows us that there is indeed an abyss of darkness which is covered over so that the light cannot penetrate filled with night that is forever dark and within it are the chaos of the forms of earth produced by erosion and calcium build up. The negative fourfold exists within the cave. These are the primordial powers that are explored when we go into the cave. They show up in the Egyptian cosmology as the Ogdad.

Out of the ogdad the Atum arises. The Atum is the emergent whole of the sort that has illusory continuity of the hypnogogic hallucination. But the Atum arises by passing from the primal powers within the meta-system and arising above them to an emergent level of the system. Atum becomes atom, becomes Atun, the sun god on high. What is outside the cave is the sun. All life is dependent on the arising of the sun. The Egyptians eventually see this as the primal drama, i.e. the movement of the sun that disperses the ultimate darkness and primal waters of the ogdad. However, this drama has not taken over yet. We are still at a point where the powers of earth are not differentiated, have not become ntr that the egyptians will eventually isolate and describe. The powers of earth and sky are still inarticulate at this point in prehistory when our ancestors discovered the analogy between the caves and the unconscious images that are projected when then went into the caves, and thus saw the mind unleashed and projecting wildly upon the cave walls the scenes of animals that arose from the concern with them in hunting. Looking at those haucinations was for the first time seeing the mind as an autonomous operation disengaged from the normal world where it is hidden in perception. In that world the reactions tell us about the schemas and their interactions. Patterns appeared and forms appeared and signs appeared that are the beginnings of the non-dual between patterns and forms which later lead to the alphabet. The alphabet is the basis for the further emergence of written language as the bearer of culture. But here we are just beginning to explore the relations between the schemas. And each type of image we find in the caves is an

exploration of that interaction of the schemas that are hidden within perception. We create background with finger tracings. Then we engrave a form on that pattern. Then we use the form of the hand to create a pattern. Then we paint a form and then we scratch over it so that pattern overlays form and erases it partially. In all this we begin to learn about traces. Traces are the key to Hyper Being and DifferAnce. Traces appear at the monad level. We leave traces when we etch into the stone. We leave traces when we leave dabs of paint. Traces are the underground interactions of writing with the medium being written upon. Traces are the memories that become objectified in cultural objects and eventually in written language. Traces are the key to understanding the third meta-level of Being.

By trace we do not mean deposits, in the first instance. What we mean is when the medium is indented and the equivalent of a footprint or handprint is left, like footprints in the snow. If you write with a pencil on a pad, and if you take up the first sheet and shade the second sheet you see the trace of the line in the underlying sheets of paper of the pad. This is a trace. But there is a very important instance of a trace. In the North Sea the soil at the bottom of the ocean can take tremendous weight because the north sea was once frozen all the way to the bottom. But if the soil is disturbed this ability to take weight vanishes. It is impossible to see this ability to take the weight of the water by compression studies in the lab. It only exists in situ for the soil at the bottom of the sea. And you see this capacity if you use rods to compress the soil in place, even though it does not show up if you

take the soil away and test it in the lab. In other words the soil remembers some how the pressure of the frozen sea on it and it can take that pressure again as it lies in situ, but it loses this memory trace if the soil is moved. So a trace is an invisible property that hearkens back to some previous state that appears in situ. A trace is like a memory. But the trace represents in Derrida's theory a hinge between possibilities which will result in an undecidability. Deleuze calls this the "dark precursor" in Difference and Repetition. There are various levels of trace. One is where it exists only in differences in possibility and is not actualized. Another is where it is actualized as a memory of a presence within matter. Another is as a groove in a substrata. Another is the equivalent of the footprint or hand print, or the finger tracings or the engravings in the stone face. Pattern tends to occur by the addition of something to the substrate rather than the perforation of the substrate. The monad is either the qualia of the substrate or is something added to the substrate. The point is that traces respond to the quality of the material substrate. Where the material substrate resists that is seen as propensity at the level of wild Being. Where the material substrate gives way and remembers the intrusion that is a reminiscence of trace. For instance metals that remember their shape give us good examples of traces. Traces can be invisible, or they can be visible.

We note that the levels of Being that are associated with hallucination stages start off with Wild Being where geometric patterns arise. These patterns show a propensity that develops into various possibilities at the level of Hyper Being

where partial forms appear. We would associate these levels with the finger tracings and the etching of non-representational lines in the caves. Finger tracings may be a gathering of the soft material in the caves for some other purpose but they tend to leave random patterns of parallel lines of various shapes. Etched lines in hard surfaces seem to be equally random. What they do is create a conditioned background for other paintings and many paintings and carvings of animals cut across this background. This background is an active field which is separated from the illusory continuity of the hypnogogic hallucination by the tunnel effect which is related to Process Being. The tunnel effect relates to the cave itself. It is a long spinning tunnel with light at the end were the surface of hyper and wild Being seems to roll up into a cylinder that the shaman passes though on his journey. We might associate this journey with the hand prints which are outlines of hands. In other words there is a vanishing of the shaman and an enveloping of him by the hallucination that overcomes him. The handprints signify those who have vanished in the travel from this world to the next. When the shaman sees the hypnogogic images he believes he has traveled to the other world on the other side of the wall where the spirits of the animals communicate with him, perhaps through the language of hunting signs that we see in the handprints themselves. The hand prints are traces of the humans, but invisible traces as they are reversed, they are not positive but negative images of the outlines of their bodies. It is as if the bodies have become transparent and the coloring of the hands is to show that they still have material existence despite their apparent transparency. So the hand prints

are like the tunnel which is light or empty at its end, traversing it is analogous to process Being or the ready-to-hand. So the signs are almost always etched and so we would associate them with Wild Being. We would expect the finger tracings and the etched non-representational lines to occasionally produce geometric forms. What is interesting is when those forms are drawn by application of a color rather than etched. Moving from etching or finger tracings up to application of red or black color takes us out of the realm of the trace into the realm above the surface of the media. This in my opinion is the realm of Process and Pure Being instead of Wild and Hyper Being. Orthogonal to this split in the kinds of Being is the split between repetition and representation. Both repetition and representation occur using the two techniques of producing images, i.e. etching or application of color. But repetition seems to favor Hyper and Wild Being while representation tends to favor Process and Pure Being. There is a fundamental asymmetry between these approaches and their connection with the kinds of Being. The vanishing of the human represented by the killed man and the appearance of the hypnagogic animals or combination animal and human figures is the culmination of the rite of passage into the chthonic world behind the membrane of the walls of the cave. But within this passage though the layers of consciousness we encounter the interoperation of the schematic structures embedded in consciousness. The behaviors of the humans in the caves shows how these schemas interact. Form starts as etching, then moves to the application of colors to the medium of the cave walls, and ends with the creation

of three dimensional forms that eventually appears as separable portable art that can be carried around. There is a clear sequence of detachment from the rock walls in the various images of represented form. On the other hand the patterns remain in the realm of finger tracings, non-representational etchings, and geometric signs. The depiction of humans is rare and is usually only in the form of the killed man or humans with animal heads. But patterns also evolve from random palimpsests that become more regular repetitions toward geometrical signs that appear as isolates. These signs ultimately give rise to letters that are comprehensible and we can see the beginning of that in the finger codes. When finger codes are turned into signs then we get the alphabet which is in turn associated with sounds. Finger codes are the key to this development which were developed for hunting in silence the wild herds of animals.