23/10/2011

IAJS Discussion Seminar with George Hogenson – Introduction by Warren Colman

NB: To access and download two papers by George Hogenson which will form the basis for the discussion, please go to the following links:

'What are symbols symbols of': http://bit.ly/gxKn6T

'The self, the symbolic and synchronicity' http://bit.ly/gj13OQ

It's a great pleasure for me to introduce George Hogenson who will be leading a seminar for the IAJS list on the theme of 'emergence'. He has been well known in the Jungian world long before he became an analyst as the author of *Jung's Struggle with Freud* (1983), an impressive and scholarly work that analysed Jung's break from Freud in terms of the creation of a different mythological understanding of time, death and authority. At that time, George was a philosophy PhD and a teacher of political philosophy, specialising in the field of international peace and security. From this strong academic background, George became interested in pursuing the practice of psychotherapy as well as its theory and qualified as a Jungian analyst in Chicago in 1998.

In 2001, George gave a plenary presentation at the IAAP Congress in Cambridge, England, debating with Anthony Stevens on the nature and origins of archetypes. This was my first introduction both to George and to the dynamic systems theory he proposed as a way of reconceptualising archetypal theory and challenging Stevens' use of evolutionary psychology as a way of bolstering the classical 'blueprint' model of archetypes as *a priori* structures. George's presentation of a short video from the field of robotics, illustrating the principles of self-organisation was a revelation to me: I well remember the feeling that I was seeing a vision of the future, an entirely new way of thinking that had the potential to revision and revitalise analytical psychology.

In the decade since then, George has amply fulfilled that initial promise with a series of ground-breaking, seminal papers, most of which have been published in the *Journal of Analytical Psychology*. The field that has come to be known as 'emergence theory' has grown and developed and is represented in the work of many other Jungian writers, such as Joe Cambray, Jean Knox, John Merchant, Patricia Skar, Hester Solomon, Margaret Wilkinson, Beverley Zabriskie – and myself.

These new ideas are not easily grasped and challenge some of the shibboleths of Jungian thought, notably the idea of innate *a priori* eternal structures that are the universal basis of psychic life. Like all new ideas, some people find them a threat: the JAP has provided a forum for robust debates with defenders of evolutionary psychology such as Alan Maloney

(2003) and more recently, Erik Goodwyn (2010). These critics seem to feel that the idea that archetypes are emergent properties of developmental processes challenges the existence of archetypes *per se* whereas what is primarily at issue is not the existence of archetypes but how they come into being and how the idea of archetypes can be aligned with advances in scientific thinking in the half a century since Jung's original work. Furthermore, while the mainly British writers such as Knox are primarily interested in the influence of early emotional development on adult psychopathology, writers such as Hogenson and Cambray have a much broader and more traditionally 'Jungian' canvass, especially involving a reconceptualising of synchronicity, one of Jung's most radical and inspiring ideas.

For this seminar, the *Journal of Analytical Psychology*'s publisher Wiley-Blackwell has agreed to make two of George's papers available on-line as a basis for the discussion. These are

- What are symbols symbols of? Situated action, mythological bootstrapping and the emergence of the Self (JAP, 2004, Vol. 49:1, 67-81)

- The Self, the symbolic and synchronicity: virtual realities and the emergence of the psyche (JAP 2005, Vol. 50:3, 271-284).

To access these papers for free download (available only for the duration of the seminar), please go to http://bit.ly/gxKn6T_ and http://bit.ly/gj13OQ_

From: George Hogenson, 24/1/11

Greetings to all the participants--

Leslie advises me that I have to get this seminar started. I am afraid that I have not done this sort of on-line seminar before, so I may need a little practice to get the process to work to everyone's satisfaction.

To begin then, in addition to the two papers that Warren has linked to in his introduction I have copied below some further introductory thoughts that will give a little more context to the discussion. These comments are very elementary, and we will see if we can get further with the really critical elements. I was tempted to continue with a longish riff on Chomsky and the problems of language and symbolism, but much of that is in the posted papers so I left it out here.

Warren mentions the short video of robots that I showed at the Cambridge Congress in 2001in his introduction, and I take it up again below. To view this video you can go to the web site of Ronald Kube,

http://webdocs.cs.ualberta.ca/~kube/

scroll down to the link to "collective robots:" and then click on "collective box-pushing demonstration." Robotics has moved a considerable distance since Kube did this little demonstration, but the value of this video is precisely its simplicity. I hope you will enjoy it.

What follows is a rather too long introduction. I hope we can move on from here.

Emergence in analytical psychology

George B. Hogenson, Ph.D.

Chicago Society of Jungian Analysts

The question at hand concerns the development, significance and nature of the discussion of emergent phenomena in analytical psychology. In large measure this discussion has taken place within the pages of the *Journal of Analytical Psychology*, but it is not exclusive to that venue (see for example (Cambray, 2002; Hogenson, 2004, 2007; Knox, 2003). Also in large measure the discussion has focused on the question of how we should understand and talk about archetypes although synchronicity has also come into the conversation. I suspect that when the overall discussion is assessed, one of the consequences will be to see both how central to Jung's theory the hypothesis of archetypes is, and also how complicated and even tenuous the hypothesis proves to be. I do want to note at the outset that in his more careful comments on archetypes Jung does use the term "hypothesis," and it behooves us to approach the question of archetypes with all the implications of hypothetical constructs in mind. As Jean Knox has outlined Jung's positions—plural—on archetypes in her book, *Archetype, Attachment, Analysis: Jungian Psychology and the Emergent Mind* (Knox, 2003), Jung took a variety of positions and drew a variety of analogies to other systems of thought—for example Plato or Kant, but also Darwin and eventually quantum mechanics—to try and pin down what he was referencing when he talked about archetypes. What Jung did not seem to grasp in his appeal to these quite varied analogies or, in the case of his biological comments, direct appeals to empirical sciences, was the degree to which many of his constructs were manifestly incompatible with one another. You really cannot combine the realm of Platonic ideas with the notion of genetic determinism. To do so is to make a rather glaring category mistake, but this problem seems to have been lost on Jung, most likely because he really did not have a good sense of what exactly he wanted a theory of archetypes to do. I imagine that this last comment somewhat tips my hand insofar as I have always been a bit sceptical about the whole idea of archetypes, although I do consider it an area worthy of further consideration. To that end, let me propose a gross generalization regarding what Jung is looking for in his discussion of archetypes:

A theory of archetypes will propose and describe a mechanism by which human ideation and behaviour displays patterns of species typical regularity, in both time and space. Further, this theory will, at a minimum, shed significant light on the workings of a set of identifiable psychological and cultural phenomena, including, but not limited to rituals, myths, religious

beliefs, and some elements of dreams and the products of directed fantasy or active imagination.

A little personal background

Jung remarks somewhere that psychological theories represent a moment of personal confession on the part of the theorist. I do think it is worthwhile, for understanding the discussion of emergence, to have a little sense of the starting positions of some of the participants. I do not want to overdo this, as the arguments marshalled on all sides ultimately have to stand on their own, but then I am an analyst so the personal does matter in some sense. Thus, Anthony Stevens, who was my interlocutor in the 2001 debate at the Cambridge International Congress that in some ways set the emergence discussion in motion (Stevens, Hogenson, & Ramos, 2003), is very clear in the introduction to his book, *Archetype: A Natural History of the Self* (Stevens, 1982) that his work with children in a Greek orphanage was deeply influential in his quest for an explanation of human behaviour. Stevens, of course, then discovered E. O. Wilson's socio-biology, which was at it apogee at the time, and used the socio-biological model as the key to an explanation of archetypes. I will return to Stevens' work below.

Jean Knox, on the other hand, worked closely with Peter Fonagy on attachment theory, which figures prominently in her work on emergence. Attachment theory is a very powerful and well-grounded approach to developmental psychology and highly applicable to analytic and therapeutic practice, and so Jean can be said to have a strongly developmental orientation to her work. Joe Cambray, in contrast, was originally trained in chemistry, in which he earned his Ph.D. before he turned to psychology. Emergent phenomena as well as many of the other elements of Joe's work such a symmetry breaking, are deeply imbedded in the paradigmatic models of chemistry and physics that form the basis of much of Joe's thinking.

As for me, I have a Ph.D. in philosophy where my concentrations in the Western tradition included the German philosophers from Leibniz to Heidegger, with particular attention to Kant, and the existentialists, particularly Kierkegaard. My original focus, however, was East Asian philosophy, particularly the Zen tradition in Buddhism, which I studied as an undergraduate at the University of Kyoto in Japan and in my initial graduate work in the Department of East Asian Languages and Literatures at Yale. What is important here is that I probably have a stronger sense than most other analysts of the importance of one's ontological commitments for the development of theory. This is particularly the case when I reference someone like theoretical biologist Susan Oyama who remarks that it is a characteristic of the Western philosophical tradition to assume that there must be a ground plan or form (archetype in itself???) that pre-exists and gives shape to phenomenal manifestations. This is an implicit assumption that is not shared in other traditions, particularly the Buddhist tradition. The significance of this point of view cannot be over emphasized. And yes, as Warren noted I also taught politics and political philosophy at Yale and have done a great deal of work in the field of international peace and security. But that is not the topic at hand.

Some Basic Concepts

With this preliminary material in hand, what can be said about emergence as a general phenomenon? The first thing to keep in mind in a discussion of emergence is that emergence is a phenomenon associated with systems. Indeed, a term you will often run into in conjunction with discussion of emergence is "complex dynamic systems theory." CDS theory is actually a term of art that has replaced the sexier term, chaos theory, that was popularized in the mid to late 1980s by researchers at the Santa Fe Institute (again, a brief autobiographical note, in the late 1980s I was on the staff of the MacArthur Foundation and was in charge of administering the initial funding of the Santa Fe Institute which brought me into direct contact with many of the researchers there as well as their published work). Chaos theory came to be seen as a misnomer for phenomena that were in fact highly deterministic but refractory to analysis due to the extreme complexity of the causal chains that drove their transformational states. Thus the famous "butterfly effect" in which a butterfly flapping its wings in China "caused" a hurricane to form in the Atlantic was predicated on the notion that there was a causal chain that connected the two events, but the chain could not be described because of intractable complexity. The fact of the matter is that the butterfly would in reality be only one of many events causing the hurricane. In this way the hurricane could be called an emergent phenomenon within the operations of the entire weather system.

In 1997 Jungian analyst John van Eenwyk proposed an interpretation of archetype theory based on an aspect of chaos theory, the idea that archetypes were "strange attractors" (Van Eenwyk, 1997). An attractor or basin of attraction is an aspect of a system toward which other elements of the system gravitate. Indeed, the orbits of the planets are determined by a gravity basin or gravity well into which the planets are continually "falling" (most natural history museums will have a model gravity well into which children can roll a coin—the coin will gradually fall into the well or attractor). A normal attractor, like a gravity well or a the watershed of a river system can be described in great detail, and the causal patterns involved pretty much fully understood. A strange attractor, on the other hand, displays the features of a chaotic system, and like the butterfly effect, is refractory to complete description of its dynamics. John's proposal regarding archetypes, while provocative and an important moment in the history of thinking about systems and archetypes, did not catch on and rarely enters into the current discussions of emergence in Jungian theory.

I would mark the beginning of the current discussion of emergence to a 1996 paper the San Francisco analyst David Tresan published in the *Journal of Analytical Psychology* (Tresan, 1996). David's paper was far more engaged with discussions in the philosophy of mind and in less exotic forms of complex dynamics than van Eenwyk's appeal to chaos theory, and in consequence I think it got more traction in relation to analytical psychology, or psychology generally. The term of art that was probably most important here was "supervenience."

A simple example of supervenience is the wetness of water. One would not expect that the combination of two gasses would result in a liquid with no variation in temperature—hydrogen and oxygen are gases at room temperature but in combination they form a liquid at room temperature. Actually, a single water molecule is not "wet," but in an aggregation of

molecules certain quantum level interactions result in a variety of peculiar phenomena that represent supervenient emergence, including the formation of a liquid—wetness—along with other features unique to water such as its peculiar freezing characteristics. What is critical here is that emergence is a way of talking about phenomena that manifest themselves by way of the interaction of a set of elements within a system.

Leaving water aside for the moment, I can illustrate an emergent phenomenon in human development in the form of human infant nursing behaviour. People who have read some of my papers in the *Journal of Analytical Psychology* will probably recognize the example but here goes. As it happens, conversational turn taking is unique to human communication. Turn taking should not be confused with sequencing behaviour in other animals, such as some bird mating rituals where first one and the other bird will perform some sort of stereotypic movement. Turn taking is a far more intricate process of negotiation between individuals for "floor time." So where does it come from? One could imagine that there is a "turn taking module" in the brain, put there by evolution that executes an algorithm that results in turn taking. This would be the position from what I call a strong innatist evolutionary psychologist—more on this below. As it happens, however, the psychologists Kenneth Kaye and Anne Wells have proposed a solution to the question of turn taking based on equally unique features of human infant nursing (Kaye & Wells, 1980). Specifically, the human infant does have an innate behaviour pattern, called the burst-pause-burst pattern of nursing in which this specific sequence of the nursing pattern repeats itself in a very stable time sequence. In other words, most all infants start out with this pattern and follow almost identical temporal patterns in nursing if no other influences intervene. Of course they do intervene, and the mother begins to interpret the pattern in accordance with her adult—i.e. culturally derived—expectations. Thus when the infant reaches a pause in the nursing pattern the mother will worry that the infant is not getting enough milk, or will worry that the infant is being lazy and will grow up to be a bum, or, if mother has been reading too much Melanie Klein she will worry that the infant is rejecting the breast. So the mother will try to stimulate the infant to resume nursing, usually by jiggling the infant. The problem with this approach is that jiggling will actually prolong the pause. The end result is that in order for both parties to have a satisfactory nursing experience—the mother not worrying too much and infant getting enough food—the mother and infant have to negotiate a turn taking process in which the infant nurses and then pauses, "giving the floor" to the mother who jiggles a little but not too much then returns the floor to the infant who will start to nurse again. This negotiation process usually takes a week to ten days and then ceases to be an issue, but it lays the foundation for a variety of inter-subjective time sequenced behaviours that persist throughout life. Looked at from this point of view, conversational turn taking is an emergent phenomenon that derives from a complex process within the uniquely human infant nursing pattern that relies heavily on a process of symbolic interpretation—hermeneutics if you want to be fancy about it.

Robots

This brings me to one of Warren's comments in his introduction, my robot video shown at the 2001 Cambridge international congress. I will try to post this video so that all can see it. The

video was made by a robotics researcher, Robert Kube, at the University of Alberta, Canada. As I noted above, since about 1986 I had been at least tangentially connected to the Santa Fe Institute, and through the Institute to other groups and research projects in the field of complex systems. One of the major initiatives developed at the Santa Fe Institute was broadly referred to as Artificial Life. This was a field that explored a variety of lifelike phenomena, usually in very simplified form (I cite one of the early ALife studies in my paper, (Hutchins & Hazelhurst, 1990). The critical word here is "simplified."

This is one of the driving elements in my own thinking, not only about archetypes but about many other things in life. *How simple can you make your system and still get the desired result?* As you will see in the paper, "What are symbols symbols of?", I reference Braitenburg (Braitenberg, 1986) and Brooks (Brooks, 1999), both of whom are working with very simple robotic systems but getting complex behavior. This is crucial to my view of emergence. So now we go to Kube's little robots. What you have here is a study of cooperative behavior. My use of this video runs this way:

If you were a psychologist from Mars, and happened to drop in on these machines—perhaps thinking they were living organisms—and knowing nothing else about them, what would you think they were doing? If you watch them, you will see that they get together and seem to communicate, and then they group around the sled and start to push it into the corner. They must be intelligent—communicating—and cooperative—pushing together.

Of course, you will notice that there are lights going on, on the sled and in the corner. What we really have here is a group of simple machines that have sensors that move them in the direction of light sources. Also, and importantly, the sled is too heavy to be pushed by one robot alone. It will only move when several robots push on it. But one could interpret this very simple system as demonstrating cooperation, and intelligence. In other words, these robots are an analogue to the situation described by Kaye and Wells in relation to nursing behaviour. In that case, of course, you do have a process of interpretation that "bootstraps" the infant into a much more complex world. But the important issue is that you can get this process started with a very simple set of behavioural actions—action patterns, as I have referred to them in my most recent paper (Hogenson, 2009).

These comments are intended to get us going. There is a great deal to be said about symbols, but much of what is relevant there can be found in the two papers that Warren has linked to in his introduction. I believe, therefore, that we are all better served if I stop at this point and allow the group to respond.

From: Susan Rowland, 25.01.11 04:17:04

Dear Professor Hogenson et al,

I am wondering how far the phenomena of "emergence" or "complexity theory" is radically different from the problems it developed to address?

My own woefully inadequate reading in this area introduces these topics through problems in evolution when researchers discovered that Darwin's competitive "adaption" could not account for the development of complex systems such as the human brain. There had to be co-evolution, learning across mutually interactive systems.

This brings me to a deeper point; how far thinking in terms of "systems" is a corrective to the excessive individualism of our culture. It brings in big issues such as to what extend these potent ideas are culturally shaped and to what extend they stem from our objective scrutiny of the world - especially if "emergence" disputes the very notion of an objective scrutiny of the world!

I have a feeling that these preliminary and far from focused thoughts may elicit some response!

Thank you for this fascinating topic!

From: George Hogenson, 25.01.11 18:17:34

Dear Susan--

We will have to refine this a bit. The earliest modern discussions of emergence that relate to our discussion are found in Conway Lloyd Morgan and James Mark Baldwin. Jung sites both Morgan and Baldwin, and I believe he may of met at least Baldwin, who was a close friend of Janet and Flournoy. I discuss Baldwin in particular in my 2001 JAP paper, The Baldwin Effect: A Neglected Aspect of Jung's Evolutionary Thinking. Baldwin and Morgan both proposed versions of Darwinism that were intended to circumvent the problems of Lamarckism while still accounting for what appeared to be the inheritance of acquired characteristics. The short form of the argument is that behavior plasticity was sufficient to allow survival in the face of environmental challenges while genetic adaptation "caught up." This is not exactly co-evolution. One of the more interesting examples, however, is the development of adult lactose tolerance among North European populations. Regarding complexity in certain evolutionary outcomes such as the brain, could you give me a source. As a general proposition most evolutionary theorists take it as given that time is not the problem for the development of very complex systems, so I would need to know a little more about what you are referencing to be helpful. It is the case that a great deal can be said about co-evolution in the systems that matter to Jungians. I strongly recommend reading Terrence Deacon's book, The Symbolic Species, along these lines. In his critique of Chomsky's view

of the need for a Language Acquisition Device, Deacon proposes that language itself has evolved precisely to be learnable by young homanoids, and that the child's memory system is particularly well adapted to this learning process, precisely because it is rather poorly suited for more mature, adult, functions. I use the term homanid here because of an interesting outcome observed in trying to train a female bonobo chimpanzee to use a simple sign language. As it happened, she was not very successful in learning the system, but her still relatively young child, who continued to cling to her while she worked with the experimental team, actually learned to system rather well. This incident complicates the no precursors issue a bit because it does appear that there are some neurological features of the higher apes that do roughly correspond to the neurological features of humans that conduce to language learning. The shortfall is that these apes do not inhabit an environment of symbols. But it does suggest that there was a moment in evolution where some of the neurology necessary to learn language began to develop--or emerge. The issue, however, is that much like the emergence of turn taking, these neurological developments probably had nothing to do with language per se.

Now, regarding emergence and an objective point of view (scrutiny) on the world, again, I would like to know more about your thinking on this. Remember, "chaos theory" proved to be a misleading term precisely because the systems these theorists were working on were highly deterministic. No argument was being made that there was not an objective, in the traditional scientific sense, point of view on the world. Just that things were too complicated to sort out. Now, a more interesting issue arises when you get into the second of the two papers Warren has posted, and we start to look at the implications of Zipf's law, which provided the foundation for fractal geometry and the definition of power laws. This is an area where you have one rather simple analytic tool that describes a surprising array of phenomena. I am playing around with several ideas about how Zipf's law relates to symbolism in Jungian terms. Just to get another ball rolling, I noticed a couple of days ago, when I was first linked to the discussion forum, that there was a lively exchange ongoing regarding a scientific approach to the Jungian symbol. As we go along I may be able to outline how Zipf's law may relate to amplification of a symbol--say a dream image--in a methodologically rigorous manner, but also one that allows for a great deal of analytical creativity. We will have to see how this works out. I would say, and perhaps this is where you are going, that a lot of the work on emergence and complex dynamic systems points us to the central role of interpretation. This is the point of the work of Kaye and Wells as it is with the robots. Perhaps the most important figures in this area are the late Ester Thelen and her colleague, Linda Smith. More on their work another time.

Must go for now. Looking forward to more discussion.

Best,
G.

From: Daniel Anderson, 26.01.11 21:17:10

Dear Professor Hogenson,

Thank for generously making the time for such detailed responses to Susan and I while you are in the midst of pre-trip preparations. I know that such times are particularly stressful. And best wishes for safe travels and a productive meeting in Zürich.

As for your pasted remarks on omsky and evolutionary psychology, thanks also. They helpfully explained some of your objections to EP. However, I didn't intend to reopen that argument as much as use it as a leaping-off place to address the relationship of your theory - which suggested to me a transcendent organization - and its relation to other theories based in genes, the brain or early childhood development. I will be exceedingly interested to see how you develop this further in the Fay Lecture series.

I see your ideas as working out a sort of scaffolding which explains many phenomena which have been difficult to account for to this point, namely the relationship between symbols, complexes, archetypes the Self and synchronicity. It also strikes me that the principles you are working with might explain other anomalies, such as the unpredictably of knowing when change occurs in therapy - much like one cannot know which grain of sand falling down will trigger an avalanche of the pile. I think you are quite right that Jung lacked the science (or perhaps, more precisely, the science of Jung's time was lacking) to account for his observations. How exciting that now we have some new models to approach these phenomena!

As a final note, I would be interested upon your return to delve into the question of pattern versus content. Does your model only address the general patterning of psychic phenomena or also its content - for example, dreaming of a wizard as opposed a CEO?

Best wishes,

Dan Anderson

Los Angeles, CA

From: Susan Rowland, 26.01.11 02:32:59

Dear George,

One argument that we have had on this list a great deal - and that you refer to here - is the extent that science can be considered as separate from issues of language, culture and psyche (or unconscious fantasies). I have been reading about the reception of "chaos theory" arguments that say that the name is misleading and indeed has provoked misconceptions in those not directly researching it. Recently I also posted a link to a New York Times article on how a very large amount of experiments with so-called objectively procured data, are becoming unrepeatable. The scientists are now saying that their unconsciousness participating in the experiments must be having a far higher impact than previously believed.

Despite appearances, I have never argued on this list that there is no objective reality, nor an attempt to map it called "science". However, as a literary unsound type, I have grave doubts about whether objectivity is achievable. It is rather a laudable aim.

A well known literary critic said that "there is no nature..." only a series of attempts to describe the non-human motivated by conscious and unconscious ideology. He was a cultural materialist. I disagree with him, taking the neo-Jungian view and one also described in my reading of "emergence" that there is a layer of cultural discourse and an emerging, creative reality behind it.

The Jungian symbol is here of prime importance for it traverses these seemingly impenetrable barriers of language, psyche and cosmos. I would love to hear more of your thoughts on the symbol.

Thank you!

Susan

From: Warren Colman, 26.01.11 19:49:20

There are some great questions 'emerging' here (in the ordinary sense, although my use of the word is an example of the way the mind is all the time forging this kind of unconscious verbal/symbolic linkage). I just want to comment briefly on Susan's italicised reference to 'an emerging creative reality behind [cultural discourse]'. To my mind, the great thing about emergence theory is that it enables us to dispense with 'behindology' - the idea of something 'behind' the visible and manifest: underlying structures, unseen realities - all that stuff. It does this without condemning us to a floating miasma of relativity where there is nothing but unstructured phenomena. Self-organisation is a way of conceptualising structure, order and indeed reality that emerges out of the most simple elements of what is already manifest - no underlying drives, forces or structures are needed. This, to me, is the beauty of the idea. So the way I'd put it would be 'a creative reality that emerges out of cultural discourse' or, more fully, the interaction between cultural discourse and the basic affective states and biological

responses of human being. This is the way I read George's analysis of the burst-pause pattern in infant feeding.

best wishes

Warren

From: George Hogenson, 26.01.11 20:13:30

Replying to Susan and Dan

Susan—Could you please send me the link to the New York Times article. Having only just joined the list I have not seen many of the previous posts, regarding objectivity and the place of the symbol in science. For starters, if you get the Journal of Analytical Psychology you might want to check back a couple of issues to a brief exchange Robert Segal and I had, along with Roderick Main, on the philosophy of science and Jungian views of religion. Given the difficulty of the subject it was a bit truncated, as I suspect Robert would agree, but I came down fairly strongly in that exchange for a rather more Latourian interpretation of Jung. That said, I think that discussions of objectivity in science as well as in other settings can begin with the simple question of what is observable, and under what conditions. When I was in graduate school at Yale in the late 1970s there were what I called the junior deconstructionists—students of students of the real deconstructionists—who seemed at times to believe that getting hit by a bus while crossing the street was nothing more than a social constructions, and therefore lacking in objective reality. I exaggerate, but to a purpose. On the other hand, there are scientists who seem to define whole swaths of experiences people claim to have as illusions because they rest on propositions that have already been ruled out of court. You may be aware that there is a bit of a dustup going on right now regarding some experiments on pre-cognition by Daryl Bem at Cornell (http://www.apa.org/pubs/journals/psp/index.aspx). I do not have a point of view on this situation, but Bem has been taking a lot of heat for even daring to investigate the phenomena. What is at stake here is the intersection of what philosophers of science and other commentators call the distinction between methodological naturalism and ontological naturalism, or materialism. Methodological naturalism simply argues that science can only investigate states of affairs that exist in the material world. This was central to the discussion between myself and Robert, who—and he can correct me if I misrepresent this—would argue that methodological natural casts sufficient doubt on religious claims to obviate any non-naturalistic claims for the truth of religion. The problem here is that methodological naturalism is used to make ontological claims that I find problematic. I think it is at least possible that one can make ontological claims that legitimately exceed the limits of

methodological naturalism. Nevertheless, methodological naturalism is the legitimate domain of science, and the basis for claims of objective reality.

The key to the scientific method, of course, is incrementalism in observation. Newton's laws of classical mechanics are not wrong, they simply do not take account of certain phenomena that could not be observed at his time. Closer to the field of psychology, it is extraordinarily important to understand the impact that certain observational technologies have had on developmental psychology. Moving from having an observer sitting in a room with a mother and infant, to having very precise, fine-grained video of a mother and infant interaction has had a major impact on how we understand those patterns and their outcomes. One simple instance, which goes to my argument regarding interpretation, is that we now can see that the neonate is really not expressing actual intentional facial expressions, but is rather randomly moving though a wide array of expressions while the mother more or less picks and chooses the expressions to comment on. Again, this results in a process of convergence toward increasingly mature patters of expression linked to states of affairs in the world. But the neonate's grimace has no more intentional content than a smile. They are random expressions—indeed they are only "expressions" in the mind of the mother. It is also the case that only in the late 1990s, with the discovery of mirror neurons, that we began to understand the neurological mechanisms that facilitate much of the interactive development of shared emotional and motor experiences.

The upshot of many such examples is, as any good scientist will tell you, is that objective reality is a bit of a relative thing from the point of view of completeness. Also, since it is first of all a matter of observation, it is also open to interpretation, and to misinterpretation. But this is what experimental replication is all about. In the case of Bem I gather that a number of other researchers have already said that they cannot replicate his findings, so there will probably be a big back and forth about whether they got the method correct. Others have claimed that social scientists like Bem have a poor grasp of statistical methods, so there will now be a big bruhaha about who can parse the data most tellingly pitting the statisticians against the social scientists ("How dare you question my ability to count from one to ten?!!!!"). When I was on the faculty at Yale I remember long discussions at hiring and promotion meetings about whether a particular candidate showed "good taste" in the selection of research topics. This was among some quite hard-core mathematical economists, for whom one would be surprised to see essentially aesthetic criteria being applied to scientific judgments.

I Much more can be said, but it is important, I would say, to have as good a sense of the actual practice and development of science as it is to have a good sense of the theory of science to fully understand what is going on, and what constitutes a sound claim of objectivity.

Regarding Dan's questions

Let me begin briefly with Goodwyn, or rather the whole evolutionary psychology business. I have to start by confessing that I am really tired of going over my objections to their position, so I may be brief at this point. One thing needs to be clear; neither I, nor Jean Knox, nor John

Marshall nor anyone else on the emergence side of this argument or on the complex dynamic systems side of things, like Thelen and Smith, argue that evolution and the biology of the brain are not important to understanding human psychology. Human beings are biological entities that have come into existence through evolution. The question is what evolved, not whether evolution is important.

I am now going to drop in the riff on Chomsky and language that I mentioned in my introductory remarks, rather than try to reproduce it. It is not complete, so I will pick up down below. Here goes—

Evolution, Language, and Symbols

Noam Chomsky is widely recognized as the most influential linguist of the 20th Century. The key to his model of language is his argument that the complexity of human syntax is such that an infant would be unable to learn it without some pre-existing set of elementary rules already existing in the brain. Chomsky himself did not speculate on any evolutionary origin for the so-called Language Acquisition Device, although some of his students, such as Steven Pinker, have proposed evolutionary arguments for its existence (Pinker & Bloom, 1990). Chomsky's argument formed one of the corner stones of the cognitive revolution in models of the mind, which resulted in the development of a widely accepted model called the massive modularity model. Essentially the argument here was that a wide variety of human capabilities, from language to mate selection, resulted from the activities of computational modules in the brain that would execute an algorithm that resulted in a form for behavior of cognition.

Although Chomsky had avoided evolutionary speculation, the cognitive model was easily linked to a revised form of Wilson's sociobiology, now termed evolutionary psychology, resulting in an explosion of speculation about the evolutionary origins and adaptive function of all sorts of behavioural patterns. It is important to note, however, that this model had two important forces driving it; on the one had there was evolutionary theory, which located the origins of most behavioural patterns in the Palaeolithic period—basically between 150,000 years ago and 10,000 years ago—but there was also the computational revolution going on in computer science, beginning with the work of Alan Turing and moving forward to the development of Artificial Intelligence. To oversimplify the cognitive model of the mind that developed out of this research program viewed the mind/brain system as a computer that was the product of evolution. Early on in this process there was as much interest in the idea that a computer program could be developed that would replicate human behaviour. Star Trek's Commander Data would be the ultimate example of this program.

A number of technical difficulties with both the evolutionary side of this program and the computational side began to develop in the late 1980s and later. In the area of computation even very simple capabilities, such as moving a robot through a defined space, proved extremely difficult to actually realize. Note that this is a task that is very different from playing chess or even diagnosing diseases, tasks AI is actually quite good at because they are highly rule bound. Even in these instances, however, computational solutions require massive

"brute force" programs. These programs are intuitively unsatisfactory as models of human mental activity. But in situations where simple rules do not define the actions to be taken, such as movement thought a complex environment, AI was essentially a failure. Not unlike the situation with chaos theory, the computational demands of many seemingly simple tasks began to appear intractable.

In my paper "What are symbols symbols of?", posted for this seminar, you will encounter the work of Rodney Brooks, now at MIT (Brooks, 1999). In the late 1980s Brooks made a radical proposal, suggesting that the solution to the computational problem was to remove the cognitive module and its algorithms from the system, and substitute direct linkages between the sensory system and the actuators of the robot. Suddenly, a task such as moving around a room, simple wall following, or, as in the box-pushing example, cooperative behaviour, became tactable. (In addition to Brooks, I strongly recommend reading Horst Hendricks-Jansen's book, Catching Ourselves in the Act (Hendricks-Jansen, 1996). It is one of the most extraordinarily well-constructed books I have ever encountered, and easily rewards multiple readings.)

What is important in Brooks' rethinking of the cognitive model is that we no longer have to think in terms of complex algorithms, implemented in modules within the brain, to initiate behaviour. We are, in effect, in the same world as the infant research of Kaye and Wells. The argument here is that the infant does have an evolved pattern of action, the burst-pause-burst pattern, but no cognitive module underlying it that is oriented toward the development of turn taking behaviour. The mother, on the other hand, has a complex, culturally determined, symbolic, interpretative strategy that begins, importantly, with the notion that all action is meaningful, i.e. intentional. Turn taking in the mature individual now becomes an emergent phenomenon, in that the original behaviour pattern that underlies it, burst-pause-burst nursing, really has no intentional content. Let me emphasize that there is an evolutionary element to this model, insofar as the action patterns are innate, but they do not have conceptual content. This is a feature that distinguishes the emergent model from the evolutionary psychology model.

From my point of view, the evolutionary psychology movement is a somewhat unholy amalgam of the cognitive revolution begun in large part by Chomsky in reaction to Skinner's behaviorism, linked to the sudden rise of the computer at about the same time, and then linked to the development of evolutionary models of behavior, largely in the work of E. O. Wilson. When you link these many complicated disciplines together you are asking for conceptual problems, and you have to be careful. This is why, as Warren pointed out in his introduction, I am particularly interested in simplicity. Call it an Occam's Razor complex, but I believe that if you can get the behaviou r out of a simple system, why postulate a more complex one. Let me come back to this issue another time. I am running out of time this morning, and I want to say a couple of things about symbols and fractals.

In the paper, The Self, The Symbolic, and Synchronicity, you correctly point to the passage on "the symbolic as a world the psyche inhabits." Note first that just above this I quote Terrence Deacon who does say straight out that his view would put the symbolic someplace in the same space as prime numbers. My own argument at this point is something of a

combination of Deacon and the work of I Concho and Sole on Zipf's law. What I did not make sufficiently clear in this paper is that Deacon is working out of a model of the symbolic that owes a great deal to Charles Sanders Peirce. Peirce, of course, had a tri-partite model of the symbolic, consisting of icons, indexes and symbols. To grossly oversimplify these terms, Icons denote the object quite directly, essentially by pointing, indexes denote by way of structural relations to the object, and symbols denote by interpretation on the part of an interpreter. Deacon correctly links these levels by arguing that icons in a sense aggregate to indexes, and indexes to symbols, but symbols derive their meaning from the interactions among the symbols themselves, and those interactions display constraints that are not arbitrary, as suggested by Saussure and others. For Deacon, in other words, the symbolic domain displays the kinds of constraints that also show up in mathematics, say in the form of prime numbers. Now, I want to add to this point of view, the work of I Cancho and Sole (Ferrer I Cancho & Solé, 2003), along with others such as Vogt and Steels (Steels, 1996; Vogt, 2004) to suggest that within the symbolic domain, with its intersecting semantic relations, the distribution of symbols will fall along a power law distribution, which begins to bring the symbolic into the fractal world.

Now, my own term for what develops at this point is symbolic density, which draws heavily on Jung's understanding of the symbol, going back to the word association test. Vogt, who is a computer scientist and roboticist has also used the term density to describe semantic structures, which he connects to a form of conceptual mapping referred to as Voronoi segmentation. Another source here is the philosopher of religion, Jean Luc Marion(Marion, 2002, 2008) who coins the expression saturated phenomena. At this point I need to hold off, because linking these elements into a more general theory of the symbol is the next step in my work, which I hope will come to fruition in my Fay Lectures at the end of March. But your point here is well taken, insofar as I believe it may come to the point where some elements or manifestations of the symbolic can be said to occupy a space that transcends categorical definition in a way that takes them out of an immanentist world view and into something transcendent. This is very much the direction Marion wants to go, and I believe it shares some important features with the tradition of the early neo-Platonists.

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Hendricks-Jansen, H. (1996). Catching Ourselves in the Act: Stuated Activity, Interactive Emergence, Evolution, and Human Thought. Cambridge, MA: The MIT Press.

Marion, J.-L. (2002). In excess: Studies of saturated phenomena (R. Horner & V. Berraud, Trans.). New York: Fordham University Press.

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Steels, L. (1996). Emergent adaptive lexicons. In P. Maes, M. Mataric, J.-A. Meyer, J. Pollack & S. W. Wilson (Eds.), SAB96. Cambridge, MA: MIT Press.

Vogt, P. (2004). Minimum cost and the emergence of the Zipf-

Mandelbrot law Paper presented at the Artificial Life IX: Proceedings of the Ninth International Conference on the Simulation and Synthesis of Living Systems.

From: Daniel Anderson, 26.01.11 21:17:10

Dear Professor Hogenson,

Thank for generously making the time for such detailed responses to Susan and I while you are in the midst of pre-trip preparations. I know that such times are particularly stressful. And best wishes for safe travels and a productive meeting in Zürich.

As for your pasted remarks on Chomsky and evolutionary psychology, thanks also. They helpfully explained some of your objections to EP. However, I didn't intend to reopen that argument as much as use it as a leaping-off place to address the relationship of your theory - which suggested to me a transcendent organization - and its relation to other theories based in genes, the brain or early childhood development. I will be exceedingly interested to see how you develop this further in the Fay Lecture series.

I see your ideas as working out a sort of scaffolding which explains many phenomena which have been difficult to account for to this point, namely the relationship between symbols, complexes, archetypes the Self and synchronicity. It also strikes me that the principles you are working with might explain other anomalies, such as the unpredictably of knowing when change occurs in therapy - much like one cannot know which grain of sand falling down will trigger an avalanche of the pile. I think you are quite right that Jung lacked the science (or perhaps, more precisely, the science of Jung's time was lacking) to account for his observations. How exciting that now we have some new models to approach these phenomena!

As a final note, I would be interested upon your return to delve into the question of pattern versus content. Does your model only address the general patterning of psychic phenomena or also its content - for example, dreaming of a wizard as opposed a CEO?

Best wishes,

Dan Anderson

Los Angeles, CA

From: George Hogenson, 26.01.11 21:57:48

Dear Dan--

Thanks for your note. Also, to all, I am quite comfortable being addressed as George. The Professor business is unnecessary.

That said, Warren has just made a comment that is quite important to keep in mind, which is that the emergence model rejects a strong precursor model for the presence of a given phenomenon. This does not mean that there are no features of the system that contribute to the emergent phenomenon, but they are not simple or immature instances of the phenomenon. Thus, as I have mentioned, there is not a turn taking module, with accompanying algorithm, nascent in the brain, just waiting to develop into fully adult behavior. But there are aspects of the organism that conduce to that outcome. So, where symbols are concerned, my argument is that as symbolic density increases you get emergent phenomena that we mark as different from one another, while they are actually more or less on a continuum. Thus synchronicity becomes an emergent property of a particularly dense symbolic structure, that would fall somewhere on the high but rare end of a power law distribution. This does have some fairly significant implications for clinical practice, among other things, insofar as one can argue that amplification is a means of increasing symbolic density. Indeed, Deacon, in an important paper titled "Emergence: The Hole in the Wheels Hub", argues that the transition between what he defines as three different levels of emergent processes is the result of processes of amplification across dimensional transitions. I will have to think about this a bit more, but I suspect this argument may shed light on one of the discussions on emotions and dream interpretation that I caught a bit of just before starting this seminar. More on that later.

As to your last question, let's hold that for now. If I understand you correctly, my off the top answer would be that I am only looking at the patterns that emerge in any symbolic system or environment. There is an argument in the literature as to whether Zipf's law only identifies frequency or does it extend to semantic content. Some have argued that you can get a randomly generated set of characters to fall out along a power law distribution, in which case you would not have any semantic content in the system. Ferrer I Cancho and Solé have analyzed these arguments, however, and contend that they are incorrect. This gets very technical, but what it raises, is precisely your question. Is there some reason to argue, for example, that mandalas are more likely to appear, or less likely or whatever than some other symbol. If semantic content has some place in the analysis of power laws, then one would potentially be in a position to say that there are archetypal symbols that will appear no matter what. So you would not expect to see a CEO where a wizard ought to be. Again, I need to

leave the issue there for the time being, and get on with other things. But I appreciate the question, and have been giving the issues it raises some thought.

Best regards,

George

From: Mark Saban, 27.01.11 17:50:40

Dear Warren

This is all very interesting. A few novice questions which I am addressing to you as George's representative in his absence. If he wants he can reply himself on his return.

1. " the great thing about emergence theory is that it enables us to dispense with 'behindology' - the idea of something 'behind' the visible and manifest: underlying structures, unseen realities - all that stuff." Maybe I am old-fashioned, but I am finding it hard to grasp what a depth psychology without some idea of unseen reality would look like. Are you suggesting that the idea of, for example, an unconscious complex which affects our life from 'behind the scenes' is to be jettisoned? Is not the idea of the unconscious itself behindological?

2. George says that "conversational turn taking is an emergent phenomenon that derives from a complex process within the uniquely human infant nursing pattern that relies heavily on a process of symbolic interpretation". He suggests that such a process does not require, for example, ideas of deeper, 'hidden' structures' (e.g. Archetypes) which might condition or cause such typical processes to occur.

Two thoughts:

a) this notion of a symbol which is not necessarily a symbol of anything, but which functions in a complex interactive cultural network reminds me of Hillman's attempt to excise the archetype itself, while maintaining the 'archetypal'. Are there possible overlaps here despite the evident contrasts?
b) In the case of turn taking George explicitly acknowledges the importance of 'an innate behavior pattern' (pause burst pause feeding) which starts the whole process off. What is to stop us merely taking the idea of structure one step back and suggesting that the archetype lies behind (coincides with) precisely such innate behaviour patterns? The emergent phenomenon would then be the result of an interaction between one archetypal event (infant behaviour pattern) and another (mother's meaning-finding (projecting) on world). George tells us confidently that the mother's expectations are culturally derived, but is this not to dismiss prematurely the possibility that there is a

basic human tendency to impose pattern and structure on the world, even if any particular example of it will naturally possess cultural-specific aspects. Is it not the case that some kind of turn-taking is universal in humankind? We can surely acknowledge that Jung severely under-emphasises the dynamic importance of the interactive and reflexive collective-cultural without necessarily feeling obliged to throw out the idea of some kind of deep-structural aspect to things.

3. In "What are symbols symbols of?" George makes a strong contrast between linear vs. non-linear perspectives on human psychological development. The emergentist approach is evidently non-linear, and is placed in opposition to Freud's strongly linear approach. The example of regression is given. From Freud's linear point of view regression is a failure to progress, while from the point of view of emergentists Michael Tucker and Kathryn Hirsh-Pasek, 'apparent developmental regression' results from an 'increased systemic variability at phase transitions in the dissolution of one stable attractor as the system moves toward another'. 'From an objective standpoint', they continue,the system appears to become less complex, more disorganized. The system is also more sensitive to disruption or trajectory changes at these points. However, following this brief, variable period, the system will reorganize, and the 'missing' behaviors may spontaneously re-emerge. Usually they will be more stable, reliable, and more complex than before the reorganization.(Tucker & Hirsh-Pasek 1993, p. 366).

Is it perhaps worth pointing out while this may conflict with a psychoanalytic model of development, it seems much more in tune with that of Jung, who not only makes a point of emphasising differences between his (more complex) notion of regression and that of Freud, but whose spiral model of individuation seems, to me at least, to have much in common with the dynamic 'pendulum' model of emergence? Might one also compare Jung's teleological (as against the psychoanalytic trauma-causal) emphasis with that of attractor-states in emergence? My intention is not to suggest that the great Jung anticipated all this but merely to note that Jung's notion of development may be less radically threatened by non-linear models of development-as-emergence than those of classical psychoanalysis (and fellow-travelling variants of Jungian thought).

Anyway I may just have got the wrong end of the stick so I look forward to being corrected.

Best wishes

Mark

From: Peter Dunlap, 27.01.11 22:24:14

Dear George,

I've read your papers and thoroughly enjoyed them. While the technical language you're speaking is advanced beyond my studies, your communication of complex ideas seems simple and elegant, that is, assuming I'm understanding your meaning. I think I understand and appreciate your deconstruction of innateness and assertion of focusing on "patterns of action." Your articulation of DST theory as developmental and focused on emergence would seem to provide a language that supports some form of a theoretical and epistemological convergence. Jung often attempted/intuited such a language in his use of an "analogy of patterning" to refer to the relationship between the biological and the psychocultural. This analogous relationship is expressed nicely when you discuss "nested time frames, and their dynamic interaction."

When you go on to say:

> One can, then, speak about real time, nested in developmental time and on through cultural time to historical and finally to symbolic and mythic time...

you seem to be asserting, like Jung, the continuity between the physical, biological, and psychocultural. This is where the whole thing catches fire. I wonder about the extended implications of what you're saying. I wonder what thought you have given to the relationship between individual development and cultural transformation. More specifically, have you reflected upon the role of the individual in what might be called the "political development" or "psychocultural development" of the human species?

Warm regards,

Peter T. Dunlap

From: Nick Stratton, 27.01.11 22:25:00

Thank you, George, for launching this IAJS discussion on Emergence. I would like to pursue two approaches in defence of Jung's theory of archetypes and the collective unconscious respectively, and would be most interested in your reactions.

One dimension that appears missing so far is affect. Jung says that archetypes exist 'at first as forms without content' hence we can know of them only via their effects on experience. To this end it is useful to distinguish a class of archetypal complexes that do exhibit characteristic features and functions. A primary feature of such complexes is their special affect. Based on Jung, we can build a profile of feelings related to:

· the autonomy of the complex - loss of ego control, being overwhelmed, alien disturbance (unknown agency - purposeful);

· projections - engagement, compulsiveness, fascination, attention-grabbing;

· myth or ritual (communal; sacred) - numinous;

· nature - awe-inspiring.

These powerful feelings seem designed to engage us (and others) with the world at large. They differ from the affect profile of one-to-one social relations and from so called basic emotions. They could however reflect the group-related imperatives of survival say 100,000 years ago, e.g. as outlined by Anthony Stevens and now John Haule (2010). There is a highly plausible co-evolutionary story here (i.e. along the Baldwin/Morgan lines that you mention).

Incidentally, should emergent features of dynamic systems appear to make innate bootstrapping processes such as archetypes redundant, would the same apply to systems of emotions? Damasio (2010 :123) states: 'The fact that emotions are unlearned, automated, and predictably stable action programs betrays their origin in natural selection.' Perhaps archetypes are emotions!

A second issue is: does the collective unconscious have a home within contemporary cognitive psychology? A tentative answer is yes. Keith Stanovich (2004) has collated some 20 theorists who advocate a dual-system approach to the mind. Here are the principal features:

System 1 (autonomous)
System 2 (analytical)
associative rule-based
holistic analytic
parallel serial
automatic controlled
relatively undemanding of cognitive capacity demanding of cognitive capacity
relatively fast relatively slow
highly contextualised decontextualised
short-leash genetic goals that are relatively stable;
long-leash goals that are utility maximising for the organism and
constantly updated because of changes in environment

Further, with others, Peter Carruthers (2006) identifies a dual-system architecture for vision. The ventral visual route feeds into conscious processes (system 2) and the dorsal visual route into unconscious processes (system 1). Taking Stanovich and Carruthers together, we can see a good fit between system 1 and Jung's collective unconscious. Jung was ahead of his time, given the resurgence of evolutionary psychology and the psychology of emotion.

A brief note on my background: (a) industrial chemist; (b) educational psychologist; (c) student of Jung (MA/PhD).

Nick Stratton

Carruthers P. (2006) The Architecture of the Mind (Oxford: OUP)

Damasio A. (2010) Self Comes to Mind (London: Heinemann)

Haule J. R. (2010) Jung in the 21st century: Volume One (London: Routledge)

Stanovich K. E. (2004) The Robot's Rebellion (Chicago: CUP)

From: Warren Colman, 29.01.11 04:01:18

Dear Mark

Many thanks for your very incisive questions, all very interesting' in their own right. I could not possibly reply as George's representative – for one thing, my knowledge of the science and philosophy involved in these issues is miniscule and entirely second hand. Nevertheless, although I come at things from my own Jungian psychoanalytic perspective, I do find myself in agreement with what George is saying and that it's very conducive to my own thought. So here is my response – I'll be just as interested as you in hearing what George has to say in due course.

'Behindology' is a term I picked up from the sociology of conspiracy theory. Conspiracy theorists make the 'teleological error' of assuming that consequences are intentions – so, if there is a financial crash, say, that must be the intention of a hidden group of actors such as the Bilderberg group (a rather private version of Davos that likewise meets annually). There is always assumed to be something 'behind the scenes' that is responsible for what happens. This makes it impossible to understand the nature of complex systems in which agency is multiple and diffuse and there are unintended consequences of actions whether by individuals, organisations or indeed governments. One sociologist, though, points out that sociology itself is frequently based on 'behindology' – the attempt to uncover the 'real' social forces behind the legitimations of the ruling classes. And guess who gets cited as an example of this way of thinking? Noam Chomsky. Not Chomsky as linguist but as Chomsky as political activist, indefatigable left-wing critic of he 'military-industrial complex'; Chomsky, the obsessive investigator of political information, combing through every detail in the search for the real activities and motivations of the capitalist elite. In both aspects of Chomsky's work, though,

we can see the same background assumption: the idea that a plan has to exist before a thing can exist as Oyama so concisely puts it, cited by George in his 'what are symbols' paper'.

This is the nub of what emergence theory and complex systems theory is challenging: When the shoal of fish change direction as one, there is no commanding officer amongst the fish to tell them to do so. The idea of a 'behind the scenes' intention to change direction is, at best, a myth and we all know how dangerous it can be to take myths literally.

In my paper on sexual metaphor (JAP 2005) and then, more broadly, in Theory as Metaphor (JAP 2009), I suggested that virtually all our theories about the psyche are mythic metaphors of this kind. They are heuristic devices, useful ways of understanding things. But the very fact that psychological theories are so diverse argues against any one model being 'the reality'.

As you quite rightly point out, the very idea of the unconscious does imply that something is going on 'behind the scenes' and even in my depiction of Chomsky's 'background assumption' I've suggested something of this kind. But our understanding of what that might be is always fluid and provisional and I think this best reflects the nature of ever-shifting complex dynamic systems. In that sense, 'complexes' are a way of describing the regularities we can observe in people's behaviour, emotions, ways of relating, fantasies, language etc. But the complex is the outcome of the way all these factors become organised in the psyche; the complex is a network hub of multiple interacting factors. But, just as the banks are not the cause of the financial crash, (far less its deliberate agents), even though the big banks are the hub of much of the activity in which the crash consists, so complexes are not the 'cause' of psychological problems but the hub of the many features that come together as a particular pattern of activity, relating and feeling.

Furthermore, all these ways of depicting the regularities we can observe can so easily become reified – whether it's unconscious phantasies and the Oedipus complex or the archetypes of the collective unconscious. Then the hypothesised structures (which are ultimately interpretations of reality) are taken to be the 'reality' and the evidence for them become relegated to 'mere appearances'. Even 'the unconscious' is a reification of unconscious processes which by their very nature are not easily knowable.

(One of the dangers of the 'structural hypothesis' is that it can lead analysts into a position where they feel they 'know' what is going on in the patient beyond what they can actually observe and for which they have evidence, whereas actually what they are doing is relating everything the patient says to the mythic ideas in their own minds, reinterpreting the material in the light of these hypotheses and then using the patient's material as evidence for their hypothesised structures. I find that it works much better to keep in mind that my ideas about the unconscious are just that – they can be extremely useful but merely as contributions to a co-constructed understanding.)

My sense is that the world of the psyche is so mercurial that we long for fixed points in order to orient ourselves – we try and establish a 'bedrock' that is organising things, preferably something that can be universalised. I can certainly own up to having spent most of my life feeling this way and this was one of the things that attracted me to the idea of archetypes.

But the other thing that attracted me was their symbolic richness (density?) and the way this resonates with powerful ('numinous') affective states. So when Jean Knox showed that archetypes could not be directly inheritable through the genome and suggested that archetypes could be better understood as early 'image schemas', I thought 'yes' and 'no'. Yes, it's time to give up the universalised inheritable structuring aspect of archetypes but 'no', image schemas are not a satisfactory replacement for their symbolic richness. So, if not inheritable, then the symbolic richness of archetypal images must be a developmental achievement, a more complex structure that emerges through the interaction between early emotional states, relationships and already existing cultural artefacts. This leads to a view of archetypal images as complex emergent symbolic forms without which psychic life in general and emotional life in particular remains chaotic and unmanageable. In this sense archetypes are tools to think with (as I think Deacon says about symbols) and symbols are the clothing of affect in image. Inevitably, there is a 'search' for the most apt clothing (cf. the discussion about magicians and CEOs) but also the clothing reciprocally affects the affect, by giving it meaning and form.

This probably does mean jettisoning 'the archetype in itself' but apart for that, it's not so much a question of jettisoning anything but of rethinking what we mean by concepts like unconscious, complex and archetype. Nor, to go on to 2a) would I say that symbols are not symbols of anything – rather it's that the symbol is an emergent structure that gives meaning and form to the symbolised out of which it arises rather than being an expression of a pre-existing form into which the symbolised flows like water into a river-bed, as Jung puts it. Water creates rivers and the god-image brings the god into being.

That's (more than) enough from me for now so I'll leave the rest to George.

With best wishes

Warren

From: George Hogenson, 29.01.11 04:01:32

Dear all--

Posting from Zurich, January 28, 2011

Dear all—

I thought I would start a post tonight with a few methodological reflections and a little history of science—very brief I hope. I then want to take up a few of the many interesting points being raised in the posts. Let me add right off that I am thoroughly enjoying this seminar, as it is a rare opportunity for me to interact with others on the topics I work on. For those of you

who are academics, and not analysts, you have no idea how isolating analytic work can be, and how desperate some of us are for intellectual companionship.

So, onward. First off, I want to recommend a book to anyone interested in the history of psychoanalysis, and more importantly the vicissitudes of interdisciplinary research and theory building. In 1995, the philosopher of science, Patricia Kitcher, wrote a wonderful study of Freud's use of other disciplines to build his theories (Kitcher, 1995). The short form of her argument is that Freud made extensive use of findings in a variety of fields that had grown up in the late 19th Century. These theories, and their associated data, were considered well founded at the time Freud appropriated them. However, they included such things as neo-Lamarckism—to which even Darwin subscribed—and a variety of other disciplines, which, Kitcher makes clear, were on the brink of radical change. In fact, a wave of changes in the natural and social science did occur between roughly 1900 and 1920, catching Freud out in largely untenable positions. Indeed, she argues that a major reason Freud's Papers on Metapsychology more or less dropped out of the psychoanalytic world-view was that his followers realized that they were in large measure predicated on ideas that had been rejected in other disciplines. Ironically, while Freud had the idea that the Papers would ground the science part of psychoanalysis, the difficulties they presented to his followers contributed to psychoanalysis becoming much more of a humanistic, hermeneutical undertaking.

I bring this up not only because Kitcher's book is a great little read in the history of psychoanalysis—and it is worth noting that she is really addressing the nature of interdisciplinary studies with Freud serving as a test case—but it is also a cautionary tale for any work that links disciplines, particularly when those disciplines are complex and undergoing rapid growth and development. This is why I try, hopefully with some success, to pay very close attention to the work going on in the disciplines I draw on for developing theory. This is not easy given that much of the work I draw on, and that others are drawing on, is very technical, frequently very mathematical, and rapidly changing. One example was an exchange I had several years ago with Alan Maloney in San Francisco over evolutionary psychology, where Dr. Maloney had found an article in the journal *Nature* regarding the FOXP2 gene, which, if mutated, causes serious language disorders. Maloney, appropriately, argued for the relevance of this finding as a counter argument to some of my assertions about language and evolutionary psychology. But in the journal *Science*, to which I subscribe, I stumbled on a short note that allowed for a very difference interpretation of the findings regarding the FOXP2. I am not bringing this up to revisit the discussion with Dr. Maloney, which was one of the more stimulating debates I have had in the *Journal of Analytical Psychology*, but rather to point up how tricky some of this stuff can get and how obsessive you have to be in working it through.

One of the problems that arises in this context, which I also want to address methodologically, is what I call "Jung apologetics"—there is also a lot of "Freud apologetics" out there. It is really distressing, and in my mind serves no useful purpose, to take an idea of Jung's—say archetypes—and search for some scientist who has an idea about how the world works that neatly links up to Jung's proposed theory. You can't say something like "physics supports Jung because Professor X, who is a physicist, has some ideas that sound a lot like

what Jung was saying." Jung tried this himself in his correspondence with Pauli, and what stands out to me in those letters is the amount of time Pauli spent trying to correct Jung's understanding of quantum mechanics. Jung apologetics is basically wishing support for something Jung said into existence. A corollary to this is that Jung was a good enough scientist to use terms like hypothesis fairly regularly. An hypothesis, of course, is a testable proposition, which is open to revision or rejection, based on further investigation. Jung's hypotheses, therefore, should not be treated as some sort of canonical verity that has to be vindicated no matter what.

It is worth keeping in mind that even when you try to link two completely natural sciences to one another you almost always have some degree of incommensurability at the intersection of the disciplines. The notion of theoretical incommensurability at the intersection of disciplines also raises the issues of either disproving a target theory or having to make some fairly major modifications to a theory. There are, for example, quite a number of anthropologists who say that Jung's notion that common motifs show up all over the world, without any direct contact, is simply wrong. First, they argue, there aren't all that many commonalities, at least not in the way they read Jung. Second, we now know a lot more about population migrations than Jung did, and the no contact proposition is increasingly tenuous, if it is sustainable at all. By and large, I have not gotten involved in this part of the argument, largely because I am interested in a different set of issues regarding how we talk about the mind, and some notion of archetypes does have a role there, I believe, but it is still not exactly what Jung thought he was talking about.

I also wanted to lay out a couple of historical points regarding the biology of evolutionary psychology. Already posted are some of my more logical or conceptual objections to evolutionary psychology, but there are a few things about the biology and evolutionary side of the matter that are worth noting. First among these are what we are to make of the gene question. If you read the earlier writings of the evolutionary psychologists, you will usually find some reference to the existence of over 100,000 genes in the human genome. This number was almost universally accepted in biology and evolutionary circles, and the EP people were perfectly within their rights to accept it. They used this rather large number to counter arguments to the effect that the wide array of human cognitive and behavioral functions they wanted to include in EP could not be encoded in the genome. "Of course it can," they responded, "just look at all those 100,000 genes." Of course, we could not just look at the genes, until the human genome project unpacked the genome and discovered that there were only something like 25,000 to 30,000 genes in the human genome, some of which were "junk genes" that did nothing, and many of which seemed to shared with such cognitively advanced organisms as the banana. This caused something of a crisis across the board, not just among advocates of EP, but among biologists and evolutionary theorists as well. Nevertheless, the EP advocates had built quite a bit of their theory on the presumption of a large gene set capable of coding a lot of information. In the time since the human genome project released its findings, the EP community has developed a number of work-arounds to deal with this problem. I do not want to get into all of them here—many have to do with discoveries about how genes are basically turned on and off by other genes or by environmental influences—but I do want to register first the what we might call the Kitcher

effect—evolutionary psychology is, after all, an interdisciplinary undertaking, and is therefore vulnerable to the vicissitudes of the interdisciplinary world—and second to remark that one should always be careful with any set of conclusions that require work-arounds to solve problems.

Given the problematic nature of the gene count, let me add a little note on the history of evolutionary theorizing. Historically, it is very important to understand that by 1900 the theory of evolution, as Darwin had formulated it in The Origin of Species, was not taken very seriously in scientific circles. For one thing, Darwin's own notion of how transmission took place was very close to Lamarckism. Darwin thought that the various parts of the body—organs, limbs etc.—contributed what he called gemules to the germ cells—eggs and sperm—and these gemules transmitted some number of acquired characteristics to the germ cells. By 1900 any form of Lamarckism had been pretty much disproven, and Darwin was in disfavor. It was about this time, however, that Mendel's work was rediscovered, and for about ten to fifteen years Mendel's gene theory dominated the field, and virtually extinguished Darwinism. It was only in the 1920s that Ronald Fischer in England, and Sewall Wright in the US concluded that you could link the two theories, and finally have the basis for a complete theory of evolution thought natural selection. Both Wright and Fischer brought formidable statistical skills to their work on evolutionary theory, and it from them that much of modern evolutionary theory derives, including a strongly statistical approach.

In addition to statistical, and thus population based theorizing, the mathematization of evolutionary theory brought in a considerable number of methodological tools from economic modeling. I do not want to go off on this too much at this point, but what is critical to understand is that most of this modeling emphasized evolutionary optimization. Evolution by natural selection, the argument went, would necessarily tend toward an optimal fit between the organism and the environment. This is basically the ideology—that is the proper term for it—that drives pure market economics. In the case of evolutionary theory, if not so much in the performance of markets, it is a very powerful tool. Now here is where all of this converges on the question of evolutionary psychology and dynamic systems theory and the position I am taking in this seminar. If you were an engineer who was suddenly surprised to learn that you only had one fourth as many parts to build a complex machine as you thought you would have, but you still had to optimize for the task at hand, how would you design your machine. I would suggest that you might want to build the simplest possible machine that would make the most use possible of available environmental resources. QED.

So, I am pushing another 2000 word disquisition, and I need to get to bed, so I am going to drop in a couple of quotations from other papers in response to at least a couple of points made earlier today. One was to the effect that it seemed I might not believe in archetypes at all. In my 2001 paper on the Baldwin effect, I made the following remark:

Put boldly, the argument in this paper leads one to conclude that the archetypes of the collective unconscious, as either modular entities in the brain or as neo-platonic abstractions in some alternative ontological universe, do not exist, in the sense that there is no place where the archetypes can be said to be. (Hogenson, 2001)(p. 606)

Rest assured, I do go on to argue that we can talk about archetypes, but as emergent phenomena, not as reified somethings out there or in the head. I should add, apropos Hillman, that I realize there are some similarities, but I would not conflate his thinking with mine. More on that another time, I hope—but it is an interesting and important point.

Another observation raised the question of whether my work would do away with a notion of the unconscious. My most recent paper in the Journal of Analytical Psychology dealt with mirror neurons, and was originally delivered in Milan and Rome in conjunction with Jean Knox and Carrado Sinigaglia, a leading Italian philosopher and neuroscientist. Among my conclusions:

Jung, of course, was still an heir to the western intellectual tradition wedded to the notion that some pre-existing plan had to underlie the emergence of phenomenal experience, the proximate form of this tradition—at least for the early psychoanalysts—being the dynamic unconscious. And so we have the Jungian theory of the collective unconscious. I now want to suggest that just as theoretical robotics, complex dynamic systems theories of development, and the discovery of mirror neurons have concluded that it is possible to develop complex behavioural patterns without the cognitive processor embedded somewhere in the brain/mind, that we may be in a position to do without the dynamic unconscious as an explanatory hypothesis. Rather, we may be looking at the historical emergence of human behaviour from the interactive engagement with the developing artefactual and linguistic species typical environment. The unconscious, then, would be more a matter of what we have yet to encounter, rather than that which lies below, either in the form of repressions or collective forms. (Hogenson, 2009)(p. 334)

This conclusion was, frankly, troubling for me, although it drew on recent work in psychoanalysis on the part of Daniel Stern and the Boston Process of Change Study Group as well as on neuroscience. Nevertheless, I have in consequence started looking more carefully at the most recent literature in neuroscience. Neuroscience has, needless to say, become, rightfully, an important element in theorizing about the mind. But there are, again, implications from some quarters that may require greater thought before we analysts, or Jungian theorists or whatever, go head over heals into an embrace of neuroscience. Take for example the work of Thomas Metzinger, whose major work is title *Being No One* (Metzinger, 2003). If you are interested you can see a lecture by Metzinger, given at the University of California, Berkeley, on the question of the immortality of the soul at:

www.youtube.com/watch?v=mthDxnFXs9k

It is about an hour long, but rewards viewing if you are interested in some of the newest and most provocative thinking in neuroscience. But you must go to the very end, as his punch line has much to do with what we are discussing. I will not give it away, however. For those of you interested in contemporary philosophy, Slovoj Zizek has some very critical and interesting things to say about Metzinger and several of the other major neuroscientists frequently cited by Jungians and Freudians alike in his book, The Parallax View (Zizek, 2006).

I will close with a quote from one of the guiding figures in my own thinking about these matters of emergence, Horst Hendricks-Jansen. It will take us back to the issues Warren has raised about no beforeism.

The synthesis of activities, producing the emergent pattern, cannot be paralleled in a corresponding synthesis of neurological correlates or mathematical characterizations. Interactive emergence means there exists no overall formal description of the high-level phenomenon, though its pattern will be clearly recognizable within the context of the creature's environment. (Hendricks-Jansen, 1996)(p. 228f)

Tomorrow my work here begins in earnest, so I am not sure how much time I will have to engage the seminar. I will try over the next week, but if I cannot make it on a regular basis I look forward to catching up.

Cheers,

George

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From: George Hogenson 29.01.11 15:32:54

Dear all—

I want to start this post by trying to respond directly to some of the questions that have come up in the last few posts. Let me start with **Peter Dunlap.**

1) Connections between the physical, biological and psychocultural. I have been thinking a lot lately about what to do with Jung's use of the term psychoid. This term has a history that begins in a fairly benign manner as a referent to the relationship between psychological phenomena and physiological phenomena. But by the time we get to the late Jung it has turned into a far more abstract, but also more universalizing concept. One of the issues here from the point of view of the concepts we are discussing is the relationship of scaling to psychological phenomena. This is a central issue in the paper The Self, the Symbolic, and Synchronicity. Much of my argument there has to do with transitions in scale. Fractal geometry can demonstrate that the texture of a rock that you can hold in your hand is congruent with the texture, if you will, of the shores of Norway. But the difference in scale gives you very different pictures of the phenomena. I have had the thought that we might be able to talk about the psychoid in terms of scaling in very much the same way. We would, then, have a continuum of sorts, which is what I think Jung was after. But one does have to be careful about scale and continuum situations. You do not want to be standing in front of an avalanche thinking to yourself that it's not a problem because it has the same mathematical structure as you find in a child's sand box.

2) Political and Psychocultural development. The above applies directly at this level. Personally, I am very pessimistic about this. Again, scale matters. Clinically, psychological transitions can be very traumatic, and it takes a skilled therapist to hold the tensions involved. Now if you scale some of that up to the level of nation states you very easily get to the level of trauma we are seeing right now in Egypt. Back in the 1950s there was a lot of talk in psychoanalytic circles to the effect that all we needed to do was have world leaders go through analysis and we would usher in an era of peace and cooperation. On the other hand, I have a good friend who did a lot of work on nuclear weapons policy during the period when atmospheric tests were still being conducted—he actually observed several of these—who thinks that the best way to insure peace would be to get representatives from the United Nations together every ten or fifteen years and set off about a 10 megaton device in the atmosphere. Then they would understand the scale of the instruments they are working with. It would scare them into cooperating more. Personally, I think my friend has a better idea than the psychoanalysts had. This is not to say that psychosocial change is not possible. There is some interesting work being done, largely in France at the moment, on the historical impact of early Christianity, which was the first religious movement to make genuinely universal claims (Buddhism is sort of in this category as well, but somewhat different in focus). You might want to take a look at Alain Badiou's Saint Paul: The Foundations of Universalism (Badiou, 2003). But what you have here, in Jungian terms, is the introduction of the Self into the course of history—and by the way, this is not a notion of the Self that in any sense corresponds to a personalistic model of the Self à la Fordham. What you have in the "Christ event"—which I take to run from approximately 50 BCE to 150 CE is one of the few psychocultural transitions that one can identify, and I would also say that human beings, at least in the West, have been trying to work it through for the last 2000 years. The Enlightenment, after all, is really just a secularization of the universalist norms of Pauline

Christianity. But now I am getting off into other territory, and so will stop this answer for the time being.

Nick Stratton

1) Let me start by adding a comment to last nights post on evolution. You mention the 100,000 years of human evolution that informs Stevens and Haule. Along with the 100,000 genes problem, another working assumption of evolutionary psychology, based appropriately in what the evolutionary theorists themselves were say, was the assumption that evolution was extremely slow moving, and that we were therefore pretty much stuck in the Paleolithic. This meant that the reconstructions offered by EP to account for behavior largely drew on assumptions about what conditions were like in the Paleolithic. Recent work on evolution, however, is beginning to ague that evolution, at least human evolution, moves a lot faster than was originally thought. One of the things that has always bothered me in a lot of the discussions of the nature of human evolution—and some of this might go to your reference to Keith Stanovich (more on that below)—is that human beings have a much greater range in mate selection than other animals, and this has a considerable impact on selection pressures in human populations. Thus, one has to consider what the implications are for mate selection in the transition from the Paleolithic to the Neolithic where you begin to get settled populations and status differentiations based on new economic imperatives. You get an outline of this in the Jacob and Esau story in Genesis. Esau is the hunter, Jacob is the calculator—actually all of these brother stories, beginning with Cain and Abel are partially economic in nature, and define social status. Esau would have been the successor in a hunter gatherer society, but by the time the story is set, wealth accumulation, in the form of more or less sedentary herding is the new economic paradigm. Esau thus loses out. From an evolutionary standpoint, this would have implications for mate selection—Jacob's next problem is all about mate selection—and hence for the evolution of the gene pool. The point being, in the case of human evolution things are probably a lot more fluid than the EP advocates originally realized, evolution is probably moving a lot faster, just in its own right, culture has a massive impact on mate selection, so even if you are staying with a simple gene model you are probably getting a lot of variation that is not Paleolithic etc.

2) Emotions. You are correct that I have not said much about emotions. The irony here is that my clinical work is heavily focused on the affective field in the consulting room. That said, what we are learning about emotions is quite important to this entire discussion. Damasio has done some very important work in this area, although it is worth noting, as Damasio does, that William James proposed much the same model of the emotions 100 years earlier. Jung, of course, was deeply focused on affective states, beginning with the word association tests. It is not accidental, then, that he actually called the complexes, feeling toned complexes. The most interesting developments in affect states, however, is in the work being done on mirror neurons. Quite frankly, the mirror neuron system should radically change our understanding of a host of clinical categories, including empathy, transference, projective identification, counter-transference, etc. Mirror neurons may also have a critical role in

developmental processes. It now seems that some of these neurons may play a role in language acquisition and our understanding of language as adults insofar as they respond to the movement of the lips of the speaker, entraining similar responses in the listener's neural system.

3) Regarding the collective unconscious and Stanovich. First, I was not familiar with Stanovich, so many thanks for the reference. I will get some of his work as soon as I can. From a quick Google check I get the sense he would be very helpful to this discussion. Concerning the collective unconscious, there are times when Jung is delightfully down to earth on these things, insofar as he remarks in one or another interview that of course there is a collective unconscious because we are all human. Sort of a "well duh" moment. On the other hand, the collective unconscious seems to be a rather complicated place after all. This is where Thomas Metzinger becomes very important for our discussion. Metzinger's preferred metaphor for the mind/brain system—Jungian psyche—is Plato's cave without the realm of ideas. The mind is trapped in the cave, and sees only shadows, but all the shadows are the totality of the real, there is no realm of ideas beyond the cave. I do not want to try and unpack all of this here. Zizek objects that Metzinger is unaware of the various senses in which he uses the notion of a self—drawing on Lacan's dual notion of the self—which strikes me as a legitimate objection, but not necessarily a decisive one. I need to work some of this through myself, but as I noted last night, with the quick quote from my paper on mirror neurons, the movement within neuropsychology presents some very serious challenges to our understanding of the psyche, including our most cherished categories like a dynamic unconscious. We will probably come back to this as we move along, but I must leave it at this point for now.

I have to return to the IAAP business for the rest of the day. Let me conclude by saying that I found Warren's comments altogether helpful, and to the point. For those of you who are interested, his comment on the flocking of birds can be studied at a web page developed by Craig Reynolds:

http://www.red3d.com/cwr/boids/

or at his app:

http://www.red3d.com/cwr/boids/applet/

Reynold's stipulates that you can get this flocking behavior if you apply three simple rules:

Separation: steer to avoid crowding local flockmates

Alignment: steer towards the average heading of local flockmates

Cohesion: steer to move toward the average position of local flockmates

What is important here is that these rules define parameters, not stipulated states. In other words, you can vary the parameters and, for example, get a tighter or a looser flock. The idea

of parameters is very important, it seems to me, in defining clinical states. Is a sociopath really just a narcissistic personality with a different set of parameter settings? More on this another time. For now, take a look at the boids, and enjoy their movements.

Best regards,

George

From: Elizabeth Brodersen, 29.01.11 15:38:00

Dear George,

Thank you for your two fascinating papers on the formation of symbols. I come from a background firstly, of the arts and secondly, the social sciences, before I became an analytical psychologist. With that perspective in mind, I'd like to draw a few general comments from your papers and on symbols as they occur to me:

Firstly, aspects of your second paper, reminded me of Daniel Stern's work (1998) 'The Interpersonal World of the Infant.' He discusses the 'emergent self' of infants at around two months of age, but he puts more stress on the importance of emotional attunement between mother and child. Stern sees the child as an active participant in this process: how far the mother sensitively adjusts to the child's individual requirements has important consequences for the child's development and well-being. Although I found your quoted analogy between mother's jiggling, the pausing of the child to accommodate it during feeding and how that develops conversational discourse, intriguing, I would still add other factors, for example, such as the emotional quality of the jiggling (fast/slow) eye contact, general facial expression and 'holding' between the two (active/passive) and how they emotionally fit/not fit together.

Secondly, during the 1980's, when I had children, it was fashionable to follow the child's cue in feeding patterns as far as it was practicable rather than fit the child into a pre-conceived pattern. The child was considered an active participant, influencing outcome according to his/her individual needs. I think one could apply this parent-child dyad to analysis: different individuals promote and attract different types of analytical approaches and interpretative skills. In terms of symbol formation in dream work, I suggest that an analysand looks unconsciously for an appropriate container (attractor is a good word) to tune into a particular unconscious complex/conflict so it can form an image to be worked with and differentiated. How far the analyst provides that container has, I think, to do with his/her own unconscious terrain (type of soil/climate) which either attracts or repels (preferably both!) a particular unconscious complex. If the emotional attunement is not wide or vital enough to fit/hold the

hidden, unconscious emotional range attached to a complex, particularly aggression, within the unconscious of the analyst, therapy cannot facilitate symbol formation that can include and address shadow, split-off differences, excluded from collective alignment, within its range.

Thirdly, you ask the question what are symbols symbols of. In my albeit limited experience of working clinically with individuals not with groups, I would say that symbols represent a creative way of presenting differences, the conflictual drives and the emotions attached to them, that allows energy to flow in new ways, not necessarily into safe, collective, consensus channels. Dreams themselves loosen up meaning through pictures so that representation no longer follows a linear, 'logical' preference but mixes it up into new, surprising ways giving impetus to new thoughts. Symbols are pictorial thinking (diffuse, non-linear, intuitive) that combine the opposites rather than exclude differences and, as such, much needed, in my opinion, to balance an predominance of rationality. Imaginative, 'illogical' thinking has an enormously calming as well as stimulating effect on stressed out, 'left-brain,' 'logical,' hierarchically dominated methodologies, perhaps even for the robots you mention! A symbol simultaneously contains the opposites, both exhibiting and integrating one or more glaring difference from 'reality' into its image, in contrast to a scientific methodology where, as far as I understand it, similarity, first, as proof rather than equal inclusion of differences informs its methodology.

Fourthly, I don't believe that therapeutic 'systems,' can create new symbols because they abstract, label and distant themselves from a spontaneous, individual expression of differences and the emotionality invested in them. They limit an open-ended, animated, interactive space needed for individual creative solutions capable of addressing certain societal/cultural collective blind spots. I see individual symbol formation as an important contribution here because they widen collective consciousness generally towards those spots by creatively including difference.

Finally, coming back to the previous discussion on 'emotion,' the recent emphasis on competition between therapists for the 'best' interpretation of a symbol does not promote a discussion about the symbols, themselves, because it is based on point scoring and hierarchical preference (who is better). Symbols, by their very nature, move away from a 'logical' preference, because they re-combine previously repressed, conflictual, unconscious differences in a more democratic way, so that 'who's better,' usually an ego defence mechanism anyway, falls away!

I think that's all for now!

With best wishes, Liz

From: **Mark Saban, 30.01.11 01:55:29**

Dear Warren

Thanks for this.

Behindology: I understand and agree with your aversion to Chomsky-esque conspiracy thinking, and even the less obvious though more insidious (if that isn't too conspiratorial a word) behindological assumptions which underpin, in your example, sociology. Note though that you yourself employ behindology when revealing these assumptions behind sociology: ("sociology is frequently based on 'behindology'"). The idea that anything is 'based on' something else surely implies that there is a more fundamental level beneath or behind it. My point is that a certain amount of behindology seems to be woven into the way we conceptualise the world. The problem, as you say, is not that this occurs, but that these behindological assumptions are given more ontological weight than any other aspect of our being in the world. So a structural approach, which is quite justifiable when regarded as heuristic metaphor, has a tendency to become reified and sedimented until it can't be shifted at all.

The mistake though, would be to think that the problem here is structure-based thinking, and that what we therefore need is to throw out all structural discourse, and replace it with discourse which is all about fluidity and play. So long as we always remember to conceptually bracket our structural theories there is no reason why they should not be just as usefully heuristic as theories which lay emphasis on ongoing emergent interactivity or whatever. This much I know you agree with: "They are heuristic devices, useful ways of understanding things. But the very fact that psychological theories are so diverse argues against any one model being 'the reality'." Quite so, but this is of course also true of a theory of emergence. This theory too is only another heuristic model which can make no more claim to be 'the reality' than any other more or less plausible theory. So to the extent that a theory of emergence has the effect of loosening up over-sedimented structural hypotheses, emphasising the spontaneous rather than the fixed, play rather than structure, the unpredictable present rather than constricting patterns of origin I am all in favour. But if it is being put forward as a new orthodoxy to replace the old ('that was all wrong, and this is all right') I am not so sure. I suspect that Derrida's writing on structure and play might be helpful here because rather than come down on the side of structure or anti-structure Derrida notes all kinds of complex movements within both structure and play which obviate a simple binary opposition. In effect, they depend upon each other for meaning. Any psychology of interest must inhabit the tension between the centripetal movement of, for example, Jung's archetypal structure of centre-based individuation, and the centrifugal mercurial, playful, chaotic movement of psyche (which, to be fair, Jung also celebrates), without falling too far one way or the other.

Science: The fact that people like George are doing the hard work of reading the literature around scientific topics like emergence and responding to them creatively and imaginatively in a Jungian context is wonderful, and can only be good for us all. As George himself remarks there are all kinds of conversations that analytical psychology can have with and about science. The least edifying is what George called 'Jung apologetics' whereby Jungians try to squeeze their limited understanding of the latest science into showing that Jung was right all along. A common Jungian misunderstanding of science stems from the idea that science is monolithic, that at any one time it has only one thing to say about any area of inquiry, and that that one thing is barely subject to change over time. This sometimes takes the form of a straw man projection of scientistic or positivistic verities onto science, with a consequent rejection, but it can also be seen when a Jungian has come across some report or paper by 'a scientist' and forever more holds onto it as the last word in objective fact. What is missed here is that at its cutting edge, science is subject to just as many different hypotheses, and varying models as any other field, if not more, and that not only is it therefore polymorphous but it is also mutable, and subject to all kinds of change over quite short periods of time. Certainly, in the long term more stable and singular truths emerge and become 'scientific facts' but in the areas which are in question and of particular interest to us (neuroscience, robotics, consciousness studies etc) there is still fierce debate and so it makes no sense to hold up the hypotheses of any one neuroscientist as bedrock 'scientific fact'. Not that this should stop those who are as well informed as George from coming up with fascinating and enlightening hypotheses of their own, inspired by the scientific literature.

However, we should perhaps beware of getting too caught up by worry about having to know everything there is to know about a subject before we allow it to start playing upon our imagination and helping to create new theoretical paradigms. Jung himself is rightly accused of having got all kinds of things, from gnosticism to catholic theology to quantum physics, completely wrong, but at his best it seems to me that what he is doing is allowing his misunderstanding to spark off all kinds of interesting new insights for his psychology. Harold Bloom talks about the 'strong misreading' in literature, and makes the point that a misreading can be just as, if not more, productive for creative synergy than a relatively faithful or accurate reading. One might then say that the history of philosophy is not so much a series of footnotes on Plato as a series of misreadings of Plato. But the important word here is 'strong' - for a misreading to really spark off something new it needs to be a strong misreading. A weak misreading (on the assumption that all readings are probably misreadings) merely produces a pallid faded reproduction of the original. Jung was a strong misreader and he misread a huge range of sources, but unfortunately, Jungians have tended to be weak misreaders, and even worse, misreaders only of Jung.

Best Wishes

Mark

From: **Matt Koeske, 30.01.11 09:24:55**

Dear George,

I'd also like to thank you very much for participating in this seminar and for your very interesting and daring papers and subsequent elaborations. I've struggled to formulate my reactions and my response to your various points. There are many points with which I agree, e.g., the great value of complexity theory to analytical psychology. But there is also a major trend in your thought that I take issue with. To simplify, this trend centers around your representation of evolutionary psychology. I am only a casual reader of EP without any expertise in that or any related (or antagonistic), but I have to say that my experience of EP writers like Steven Pinker, Leda Cosmides, John Tooby, David Buss, and others is very different than yours must be. What you have attributed to EP does not at all accord with what my own readings have turned up.

Trying to elaborate a demonstration of which reading is "correct" is probably not worth the time and space this seminar allows. I will say, though, that I do find your construction of EP extremely familiar. It is the very same construction that other prominent critics of EP (e.g., Stephen Jay Gould) have issued. EPists seem to feel that this construction relies on a drastic misrepresentation of their field and its foundational ideas. They feel that Gould is essentially a pseudo-scientist who happened to have a bully-pulpit (his popularity as a writer) to persuade receptive audiences of humanities and social science academics that EP is, as you colorfully put it, an "unholy amalgam". That is, EPists see Gould as preaching to the converted (many postmoderns who have worldviews based in social constructivism) and taking the discussion and analysis of EP out of the realm of science and displacing it into the realm of politics and its signature dialect of propaganda.

Many reasoned (and some annoyed) refutations of Gould and other critics have been made by EPists, and most of these can be easily found on the internet for free. I can't argue their case as well as they can themselves, so I will just leave a few starting places for anyone interested. A flawed but useful place to begin is a Wikipedia article entitled, "Evolutionary Psychology Controversy". It is less the article itself than the "Further Reading" section and references that make good jumping off spots. A list of professional journals publishing EP research and thought can be found at the bottom of the main Wikipedia article on EP, and some of these journals have free online content worth investigating.

Also useful for those who want to actually hear "the other side" are the articles on the websites of Steven Pinker, David Buss, and Cosmides and Tooby. There are so many articles one can find using these sources alone that systematically refute positions on EP like the ones you've advocated or else lay out what EPists really do think. A few one could do well to begin with (in addition to those in the Further Reading of the Wiki article) are Pinker's "So How Does the Mind Work?" (a response to Jerry Fodor's response to Pinker's *How the Mind Works* (1997) called *The Mind Doesn't Work that Way* (2000)) and "Why Nature & Nurture

Won't Go Away", Tooby's and Cosmides' EP primer, A chapter of David Buss's Handbook of Evolutionary Psychology (2005) by Edward Hagen entitled "Controversies Surrounding Evolutionary Psychology", Hagen's "Evolutionary Psychology FAQ", and Tooby's and Cosmides' response to Gould's criticisms of EP.

I'm not sure if I will be able to state this convincingly enough, but I do not make these citations as attempts to advocate for EP or declare that its ideas and thinkers are "right" or that Jungians should all bow down and embrace EP as its new Ten Commandments. There are many aspects of EP that I remain skeptical about. My philosophical orientation could generally be characterized as something like "progressive Jungian" (and by the conventions of any of the major Jungian schools, perhaps as "radical"). EP does not delve into depth psychology. What I will advocate is that my readings of EP have convinced me that it is a completely legitimate field that proceeds scientifically (testing hypotheses and revising them based on that testing) and not ideologically (as its critics claim). It is a much, much more scientific field than analytical psychology (in any of its modalities). Of course, I'm talking about methodologies, not "Truth".

As one who identifies as a Jungian, my concern here is with the way Jungians and Jungianism react to and treat EP. I've closely followed the debates in *The Journal of Analytical Psychology* over the last decade or so that pertain to archetypes, emergentism and innateness, and I believe there is a trend of misrepresentation of EP in the majority emergentist position in these arguments. In fact, it was as a gut reaction to this perceived bias that I began searching out more EP from the horse's mouth and discovered the references I listed above.

I do not think it is intellectually rigorous or honest for Jungians to build post-Jungian theories based in a misinformed or prejudiced dismissal of EP. EP should be followed closely by post-Jungians and treated as relevant research and thinking. To be more analytic, I have to wonder if there isn't a developmentalist/psychoanalytic bias in the emergentist opinions expressed in the JAP that allows them to (more or less unconsciously?) react against seemingly "nativist" ideas on a more affective than scientific basis. Although I wholeheartedly agree with you that "Jung apologetics" should be condemned by Jungians who seek to remain intellectually credible, I have to wonder if you are willing to apply this critique equally to both "nativist"/genetic Jungian notions and, say, other non-nativist Jungian mainstays like synchronicity theory (which certainly deserves a good deal of scrutiny).

All that said, I do not want to advocate a "nativist" position on archetypes. Yet, I am not entirely satisfied with an "emergentist" position on archetypes either. Least of all am I satisfied with a "developmentalist" position (that attributes all archetypal phenomena largely to interactions between infant and mother during the first few years of life). I don't really know what the relationship of archetypes to genes is. If there is one, I suspect it is very complex and subtle and in no way a "determinism" ("determinism" can be equally innate or developmental, we should honestly confess). Like all the EPists I have read, I do not advocate complex, innate "cognitive processors" in the mind/brain. I suspect that whatever genetic factors do influence the psyche are (as you suggest in your analogies) quite "simple" (relatively) and of a structural nature. That is, the complex system of psyche has systemic limitations, and although some of these limitations are products of complex systems in

general (and are therefore not biological), others are defined at least in part by our genes. Although you don't deny this (I think), I do think you downplay and/or too easily dismiss the potential importance of these "simple" genetic contributions.

As an example, in the Kube robot study you use, these robots still have important structural limitations (no matter how "simple"). They have wheels and a capacity to turn, but can move only on the horizontal plane. They have programs that "drive" them to move toward the light source and to interact with the box in specific ways. I think it is a matter of persepctive to say that the "emergent" behavior of these robots is somehow more important than their "innate" predispositions (or, in this case, actual programming/determinism) in the achievement of their "survival task". Also, by contrast, due to evolution by natural selection, actual living organisms have much more efficient means of surviving and navigating their environments. The video of the robots demonstrates how relatively ill-equipped they really are to succeed at pushing the box into the light source.

One thing on which I do agree with you is that Jung's archetype theory needs to be radically revamped, and it may very well be the case that "**archetypes of the collective unconscious, as either modular entities in the brain or as neo-platonic abstractions in some alternative ontological universe, do not exist, in the sense that there is no place where the archetypes can be said to be.**" I don't think habitual human behaviors aimed at adaptation, survival and fitness exist in a cultural vacuum untouched by genes, but I do think it is very tricky to connect these patterned behaviors to archetypal phenomena as we can perceive and study them. After surveying Jungian reconstructions of archetype theory over the last decades, I find myself concerned that any theoretical approach to archetypes that attempts to formulate general, abstract, universal ideas of what archetypes are or are not is likely to be flawed.

My suggestion is that we seek to return to a phenomenological mode of archetypal study. That is, we should strive to be more organized and systematic with our classification of archetypal phenomena. In general, Jungians have been rather haphazard with the way they build archetypal catagories like "anima/animus", Self, wise old wo/man, hero, shadow and so forth. Individual Jungians have typically called something an archetype as it suits them or seems to suit their specific case studies (e.g., Patient X is possessed by an "Artemis archetype/complex"). That kind of usage is poetic/metaphoric, and it may be clinically useful as a languaging treatment in certain situations, but it does not contribute anything to a more scientific analysis of data. I think we have a lot more to learn merely from addressing these archetypal phenomena more "scientifically" and as a larger data set.

But when we do try to construct a more robust data set and analyze it functionally, I do think we should ask of these emergent categories: "Could genes or something like 'instincts' be shaping this archetype and defining at least part of its numinosity?" Jung's grasp of biology may not have been adequate, but his theory that archetypes are founded on instincts cannot currently be considered scientifically unsound or dismissible. As much as we should avoid "Jung apologetics", I think we should also strive to avoid unnecessary "Jung deprecation". We should even ask ourselves (i.e., self-analyze) how Jung, as an intellectual and perhaps

spiritual "father", affects us relationally and psychologically. How might our post-Jungian theories depend on our affective constructions of Jung?

Additionally, I would recommend caution in any thrust to make emergence into a "miracle" that creates something out of nothing. I think it would be helpful to ask of emergence what we also ask of the innate when studying archetypal phenomena. We shouldn't merely cry emergence, cite a number of very difficult to comprehend and assess studies from outside our field, and then treat this as a solid foundation on which to rebuild (or dispose of) an archetype theory. When we are dealing with emergence, we are dealing with a phenomenon that remains predominately mysterious and still barely studied. There are scientific ideas behind emergence and other elements of complexity theory, but there are also many unscientific or pseudo-scientific applications and interpretations of emergence.

I do feel that complexity theory is about the best thing that has emerged as far as the progressive modernization of Jungian thought is concerned, but complexity remains a very young field operating on the fringe of science. In this circumstance, we can easily see that the way complexity theory is employed by developmental biologists and psychologists is very different than the way evolutionary biologists and psychologists might employ it. Science cannot yet say which if either interpretation is correct. Jungians are even less qualified to make such determinations (wholly reliant on the research and theories of other fields as we currently are).

I don't mean to say, absolutely, we should "stick with what we know", but I do adamantly believe we should *not disregard* what we know or what we are familiar with (namely, psychic phenomena). The test of any new theory or revision is that it makes better sense of the data than the old theories. One thing I admire about Jung was his tendency to take phenomenological stances rather than float abstract, paradigmatic theories of psychology. Yes, he also attempted to interpret psychic phenomena, and in these attempts made a number of mistakes. But his interpretations, even when based in flawed science or flawed philosophy, did not deviate from the data at hand. His interpretations were usually logical. His *valuation* of the data was, I feel, essentially scientific. His theories and interpretations were often less so.

But it is entirely within the prescribed conduct of science to be wrong about interpretations and analysis of data. So long as we stick with the data (and do not ignore data that don't seem to agree with our theories), theories can always be revised as those data dictate. Archetype theory may not be salvageable. But the data from which Jung assembled his archetype theory is just as valid now as it was when Jung attempted to interpret it. Jung may not have been a great scientist in practice, but as an "intuitive scientist", I often feel he still surpasses his successors. That is, he had a good nose for which data should be grouped together and lent themselves to generalizing interpretations.

If analytical psychology is to grow and prove useful as an investigation and interpretation of psyche, I think we could do much worse than ground ourselves in the data Jung accumulated and emphasized (data which have become even more robust since Jung sought to interpret them). What an archetype is, though fascinating to ponder and debate, is much less important

to analytical psychology than the treatment of those data any archetype theory is meant to explain. Where the theory eclipses the data, I remain skeptical. In this sense (although in almost no other), I suppose I am a "classical" Jungian. I admire Jung's nose and valuation for psychic data and have learned a lot from them. Although it is often overstated (including recently on this list), Jung's theories strike me as far less valuable (and, astutely, much less valued by Jung). This isn't to claim (as some other IAJS members seem to have) that Jung rejected the value of theory in some general way. Rather, his valuation of theory was much less pronounced than his valuation of those data that theory was constructed to explain. By valuating the data more than the theory, I would argue that Jung managed to be "more scientific" than the vast majority of his successors have been and can still serve as a useful model of an investigator of the psyche.

Best regards,

Matt
(Pittsburgh, PA)

From: Nancy Krieger, 31.01.11 05:54:22

Hello George and fellow colleagues,

I have been following this discussion with interest, especially the comments on the psychoid. I see this concept as grounding Jungian theory firmly in the body, specifically the brain stem and lower limbic system. Jung wrote about instinct and if instinct is anywhere present in the brain at birth, it must be in this area since connection to the precortical limbic areas and neocortex only develops after birth. (Lise Eliot What's going on in there? 1999) If you want to limit this 'instinct' to basic fear responses and the patterns of burst-pause-burst and face recognition already mention and which Jean Knox refers to, I think that is enough. All the rest of the archetypal image end of the psychoid can be built around these simple responses based on cultural interaction between the infant and caregiver dyad and stored first in the cerebellum and later in the neocortex as myelination to these areas mature. The feeling-toned complex then builds around this first memory structure and is an attractor, a state that the psyche often settles in.

Evolution is a out of my area but I could understand that two processes are going on here, the slow genetic changes of natural selection and then sudden non-linear changes. The slow changes build up, like the grains of sand forming a sand pile, and suddenly, perhaps something in the environment changes or perhaps not, but the system suddenly experiences a major change, the sand pile collapses and a new species is born.

These represent just my own understanding of these topics. I have particularly appreciated also the contribution on the symbol in the analytic setting.

Nancy Krieger

From: Susan Rowland, 31.01.11 05:59:00

Dear George,

Thank you so much for this wonderfully enriching seminar. You have been remarkably generous with your time and your work.

I want to respond to your recent post and I hope you will forgive me, if like before, it is perverse. As you more or less point out here, perversity, is endemic to interdisciplinary and multidisciplinary enterprises. So I was to give a reply to your description of the uneven, patchy, and shifting progress of evolutionary theory – and then to what emergence might do to the hypothesis of the unconscious. At the end of my message I am pasting the parts of yours that are germane here.

In a narrow selfish way I am seeing further why I wrote my earlier comments about language and how it is not transparent and therefore its impact upon emergence. I am just completing a book about Jung, emergence and literature. Of course, such a project encounters huge interdisciplinary issues that you outline so cogently here. My main methods of coping with these questions are concepts of creativity, literariness and myth. All these are more focused and precise than might appear.

However to questions of emergence in the evolution of evolution, as a theory. I am afraid I cannot renounce 'levels' for I want to ask: should not emergence theory consider the emergence of all these different (overlapping and yet not wholly compatible) ideas? What is going on that we not only have these shifts within science but also a multiplying of disciplinary perspectives? Does the emergence theory you embrace and generate rely wholly upon the rational ego to build it? If other disciplines use different mental faculties then can emergence science give them credit?

We all know the famous stories of science and synchronicity and the crucial role of dreams in some important breakthroughs. This is not all I am suggesting. After all, if the discipline of literary studies makes any claim for validity, it might suggest that a novel, poem, play or imaginative film may have a status equivalent to a hypothesis outlined in a scientific paper.

After all, while it is true that a scientific hypothesis can be tested that 1) still restricts the science to a specific mode of knowledge, albeit one with huge cultural power and 2) so much about evolution and emergence cannot be tested.

So to the hypothesis of the unconscious. What bothers me in so many accounts of evolution, with or without emergence, is a lack of attention paid to the notion of creativity. I have a hunch that a lot of the resistance to evolution per se, and hanging onto the idea of a creator God, is that the versions of evolution that circulate are reduced and reductive. As a hypothesis, the concept of "the unconscious" seems generated in the late 19th century as a receptacle of the psychic stuff that was not wanted by dominant explanations of the world. Jung's doctoral thesis, analyzing a series of séances, is a wonderful struggle to cope with/assign meaning to occult matter. Neither, "spirits" nor "sexuality" nor even "the unconscious' work to stabilize and authenticate meaning here. To me the genius of Jung's lies in his later acceptance of this apparent 'failure' of psychology and his building of his work up on it.

On the one hand, we know there is something in the term "unconscious" because we dream and however much dreams draw upon conscious life, they are capable of strangeness, of startling re-combinations, of generating something in us that is other.

To quote you:

> I now want to suggest that just as theoretical robotics, complex dynamic systems theories of development, and the discovery of mirror neurons have concluded that it is possible to develop complex behavioural patterns without the cognitive processor embedded somewhere in the brain/mind, that we may be in a position to do without the dynamic unconscious as an explanatory hypothesis. Rather, we may be looking at the historical emergence of human behaviour from the interactive engagement with the developing artefactual and linguistic species typical environment. The unconscious, then, would be more a matter of what we have yet to encounter, rather than that which lies below, either in the form of repressions or collective forms. (Hogenson, 2009)(p. 334)

What seems to me to be at stake here and in emergence theory is the extent to which origin matters? We have this dream-maker we call an unconscious. Freud had an account of how it came about; Jung's differs. These different although overlapping origin stories for the dream-maker matter because they assign different meaning and value to part of ourselves we can neither fully know or control.

Your account of the unconscious above works fine for me except that in going close to theories of the discursive origin of the self, even when added to bio-linguistic evolutionary considerations – looks like it is beginning to close down creativity. When you say: "The unconscious, then, would be more a matter of what we have yet to encounter" – I like it because in the unknown possibilities of the world is perhaps, enough for the magical, numinous qualities of the unconscious to work (an alchemical term).

It comes down to this: does emergence allow for the genuine "other", as I hope complexity theory and co-evolution does when it posits an intelligence in nature that we can never fully know? Is there an "other' which we have hidden under, within that word "conscious" or does talk about multiple lines of causality eliminate the imagination as the home of that which can never be know rationally? Does emergence want to subdue the whole psyche?

So my argument here is that origin stories for 'the unconscious" matter if they restrict its definition. I am also suggesting that what I said earlier about language matters because it is impossible to fix meaning. Emergence is described sometimes as a theory rationalizing the psyche, sometimes as an-other version of the Earth Goddess myth of the numinous. Evolutionary psychology gets a terrible name when it tries to - in effect – eradicate psychology, say that evolutionary principles subordinate the reality of the psyche.

Similarly, there is a newish literary approach called "Literary Darwinism". The only thing wrong with it is that it is not literary and it is not Darwinian. For it assumes that all literature can be entirely explained by "natural selection", when Darwin himself avoided such a sweeping approach to his writing.

So in emergence, I am worried about description that seem to drown the "other", down play creativity, given that such world-building narratives depend upon a logical and rational psyche that is far from all that we are.

For me personally, it does not matter if archetypes are simply a rhetorical fiction, inherited genetic code or formed in early childhood – it matters that they are creative and affected by cultural discourse yet not limited to it. I suggest that this is an important part of our discussion here because culturally we are so conditioned to taking scientific and evolutionary explanations as origin stories with ontological consequences.

My point about the shifting explanations and many different disciplines is that we need to analyse these shifts, breaks, differences and irreconcilables in knowledge as significant as shifts within the cultural consciousness collectively and individually. For me, it adds up to a need to factor in the not yet known or knowable in knowledge and to allow the ever creative Other in the psyche to utter.

Susan

From: Chad Engbers, 31.01.11 17:22:13

Dear George,

I'd like to add my word of thanks for your time and thoughtfulness in leading this discussion. Reading your papers and this conversation has been a deep intellectual delight.

I'll address this message to you in order to focus it, but my question involves recent concerns from others, too, some of whom I mention below. I trust and hope that they'll feel free to answer as well.

I was interested in your reference to Patricia Kitcher's book on Freud, and in the point that it can be risky to cross disciplines when the discipline to which one is crossing is changing quickly. The risk, as I understand it, is that the knowledge and methodology of a quickly changing discipline soon becomes outdated, eroding part of the foundation for one's interdisciplinary project. The fool builds his house upon the sand.

As I read your account of Kitcher, I was half expecting you to mention Jung and alchemy, a discipline which was not quickly changing in Jung's time because it was completely dead. Jung's use of alchemy was certainly perceptive and creative, but I've often wondered whether

the psychological aspects of alchemy could really be so neatly severed from the chemical aspects that Jung himself readily acknowledges were utterly outdated.

As I've followed this conversation, I've found myself trying to draw comparisons between your relationship to current science and Jung's to alchemy.

What I'm ultimately after here is not specifically the relationship of psychology to science, but the larger issue of what is prudent and imprudent in crossing disciplines.

This is an abiding concern for me, because I'm a literary scholar specializing in penitential poetry of the English Renaissance. I'm currently asking whether Jung can help us to understand John Donne's Holy Sonnets. In other words, I routinely cross back and forth between the fields of theology and poetics and am now considering forays into analytical psychology.

Literary scholars seem all too eager to cross disciplines, perhaps because our constant experience with metaphor makes us comfortable talking about one thing in terms of another. Every metaphor is necessarily an imperfect comparison (to say that Achilles descends on Hector as hawk descends on a dove is not to say that either man has feathers), so it's fairly easy for literary critics to accept the idea that borrowings from other fields can be useful while admittedly imperfect.

It seems safe enough to take idea from another discipline as a metaphor, an admittedly incomplete comparison; in fact, we'd have a difficult time talking about anything *without* metaphor--even when metaphor gets us into trouble. One example: the term "behindology" is tricky partly because it's employing the basic conceptual metaphor of talking about abstract thoughts and motivations in spatial terms. It's hard to say whether something is really *behind* something else when neither thing exists in space.

(Jung was sensitive to this dimension of language and resisted the term "subconscious" because of the hierarchical implications of that spatial metaphor.)

As I understand you and Jung, however, you are not merely taking scientific ideas as metaphors for psychic phenomena. Jung was not merely saying that alchemical processes can serve as handy analogies for psychic processes; he took pains to illustrate passages in alchemical writings that show psychic processes *actually happening* (although that is a problematic phrase) in the work. And like Jung, at least in this respect, I see you reading the science of emergence not in a literary way—that is, not as a metaphor for the mind—but as a more literal account of how things work.

A few of the recent posts in this seminar have gotten at this issue of how one reads across disciplines.

Mark Saban writes that "we should perhaps beware of getting too caught up by worry about having to know everything there is to know about a subject before we allow it to start playing upon our imagination and helping to create new theoretical paradigms." He cautiously advances Harold Bloom's idea of "strong mis-reading" and—very plausibly, I think—characterizes Jung himself as a strong mis-reader.

Matt Koeske's message on EP, however, seems to raise the dangers of mis-reading a theory—dangers which must increase when one is outside the discipline. The "literary darwinism" to which Susan Rowland refers is another example of these dangers: it's what happens when literary critics attempt to make scientific claims without really doing science—and, as Susan points out, they quickly lose their own commitments to literariness in the process. Is this a danger for psychologists studying robots?

In short, George, I'd be curious to hear your thoughts on what you think constitutes mis-reading across disciplines, to what extent mis-reading should be a concern, and ways in which you've tried to avoid it.

Thanks,

Chad

From: George Hogenson, 01.02.11 00:07:15

Dear Liz—

Thank you for your questions and detailed reflections. Regarding Stern's work, I have no objection to his emphasis on emotional attunement. Rather the contrary. Mind you, regarding the infant's participation, I was referencing the very first period of the process, and the question is whether the true neonate, as opposed to say the two month old, or perhaps even the two week old, comes equipped with much more than an action pattern. In that regard, I would totally agree that the qualities associated with the interaction, at least on the part of the mother, will be critical to the qualities of the developmental process. The angry mother, who insists that the infant respond now, or not at all--breaking of the feed--is going to have a very different child than the mother who, like you I take it, follows the child. Mind you, though, given what we are learning about the micro level of interpersonal interaction, and the complex role of mirror neurons in some of these processes, I would suggest that there is no such thing as following the child's cue as far as it was practicable, even in the most attentive mother.

This extends to the analytic setting as well. My own experience is that every person who comes through the door requires a different response. I value many of the essays in Vol 16 of Jung's collected works precisely because you can see how adaptive he was to the needs of his patients. Again, I would agree totally that the holding capacity--my word--of the analyst is a critical feature of the entire process. I tell trainees in our program in Chicago that they have to be constantly and acutely aware of the limits of their ability to hold and be attuned to the emotional dimension of their patient's experience, and that there is no virtue in trying to go beyond one's limits.

Regarding symbols, as you will see in the papers, particularly The Self etc., it is possible to say something scientific, if you will, about symbols, insofar as any symbol system seems to display the features of Zipf's law. But one of the results that falls out of this analysis is that genuine symbols also always have a degree of ambiguity about them, which, I would say, provides the foundation for the possibility of interpretation, and more importantly for Jungians and for the process of emergence, for amplification. Just a not here to clarify some of this. George Zipf, who was a linguist at Harvard, started his analysis on the basis of what he called the principle of least effort. By this he meant that both the speaker--or symbol creator--and the listener--or symbol interpreter--would try to communicate/understand with the least amount of effort. They would be trying to achieve the point of good enough to be understood, rather than perfect understanding. In his work and in the work of the researchers I cite in my papers, this is the first step in distinguishing a symbol from an animal call, for example. Animal calls, say the monkey's cry upon seeing a snake, have an unambiguous relationship to their referent. Cry A always and only refers to Snake. Humans have some remnant cry like expressions, "look out!" might come close, but the majority of the time our representations are ambiguous--"I was thinking about my mother the other night." is open ended in what exactly to make of it, but the principle of least effort allows us to both say enough and understand enough to have a conversation. But the conversation will lead to more precision, but also require more effort, a process that eventually leads to things like Zipf's law.

Now take amplification. "Last night I dreamed that I through a rock through the window at my church." Ah, thinks the analyst, rock = stone, philosopher's stone??? Rock, "you shall be known as Peter, and upon this rock I will build my church." etc. An increasing complex network can be built up around symbols in a dream interpretation. But before long you are building a complex and rather dynamic system of interlocking references, and categorial patterns. The point of my notion of symbolic density, and I believe of Marion's notion of saturated phenomena, is that at some point the structure reaches a level of density/saturation where it transcends the limits of categorial definition, at which point you enter into the world of revelation, or, as Ricoeur might say, manifestation of the sacred. To ground this just a bit more in the clinical, Marion has a wonderful essay where he discusses the human face as the setting for an endless hermeneutics. It seems to me that this expression captures something very apt about the analytic process.

I am not usually one to get into arguments about who is the best analyst. It does seem to me that Jung was particularly interested in the richness of experience and reference that the analyst could bring to the work, mainly because of the importance of amplification. I do think that in some instances our training programs may not do enough to encourage the breadth of reading and other experience that serves to underwrite the process of amplification. There is an important aspect of the education people in Jung's era received that gives rise to his whole idea of amplification that we have largely lost. I also do believe strongly that in the actual process of analysis that it is the nature of the human relationship that is the most important single element. Please keep in mind that what these papers and my discussion is intended to do is provide some way of understanding the nature of the symbolic process generally, and for providing some foundation for making judgements about some of Jung's theoretical proposals.

In the course of doing that, I would hope to be able to add to our actual understanding of the nature of the analytic process.

Hope this helps, more later.

Best,
G.

From: **George Hogenson, 01.02.11 16:58:14**

Dear Matt--

Thank you for your comments. Let me see if I can be a little more precise about my difficulties with EP, but by way of self-defense let me first note that I am working from memory here--I do not have my library with me so I may have some trouble citing chapter and verse, but will give it a go. It is entirely possible that I have gotten a bit reflexive in my responses, not the least because I feel that the EP folks are not really listening to or understood the substance, not so much of the criticisms directed at them, as at the alternative interpretations of the processes involved in behavior. In this regard, although I have a great deal of respect for Steven J. Gould, I really do not think that I or the other critics with whom I would associate myself, are following his line of reasoning--although he did make more substantive criticisms than his detractors admit at times. Gould was primarily criticized for what some thought was arguing exclusively from a political or ideological standpoint rather than a scientific point of view. This part of the argument goes back to the early days of socio-biology, at which time both Gould and Richard Lewontin did in fact criticize Wilson in large measure from a political point of view. It is, by the way, entirely unfair, and probably inappropriate to call either of these men pseudo-scientists, given their exceptional contributions in their specialties, and I doubt that Wilson, who was their main target but also a man of great generosity, would ever use that term. By the same token, Wilson, who is a distinguished entomologist, thought he had found the holy grail of human behavior when he first published his work on socio-biology. It is probably the case that Gould and Lewontin were wrong to use such charged political language to attack Wilson, but it was also the case that Wilson, as he soon had to admit, had grossly over stated his case. In relatively short order he had to cut back radically on the extent to which he was willing to attribute behavioral patterns to the kind of fairly hard edged genetic cause and effect of his original proposal. There is a problem that this aspect of Wilson's work presents, and which I think still exists in EP, which is the moving target phenomenon. There are times when it is a little difficult to know where the theory stands at any given time, which makes one suspicious about the foundations of the work. More on that below.

After Wilson revised his original theory, and made statements along the lines of socio-biology being able to account for maybe 10% of human behavior there was something of a hiatus in the development of the evolutionary work on behavior. This is were evolutionary psychology comes into the picture. The earliest work on EP started from the proposition that Wilson's mistake was that he was not a psychologist, and thus did not ask the right questions about behavior, regardless of how he wanted to account for the origins of behavior. He could have argued that all human behavior was programed by the giant flying spaghetti monster, and he would still have been off because of his problems with the behavior side of things. Evolutionary Psychology, on the other hand, sets about to analyze a behavioral pattern, and then ask questions about the evolutionary path that leads to an explanation for the existence of that behavioral pattern. To this point all is well and good, because, as I have said repeatedly, no one on the emergentist side of things argues that evolution does not have role to play in the constitution of human behavior. The issues are in the details. For myself, the main problems lie in the area of what one can say about the nature of mind, or of the mind/brain system. The terms of reference that the original EP theorists used to describe the mind/brain system as it related to behavior were that the system was "massively modular" and that the modules were "domain specific" and that they executed algorithms in response to environmental situations. Further, these algorithms were the result of evolutionary adaptations to life on the paleolithic savannah and that therefore we had to reconstruct that environment and deduce why certain behaviors exist. As an added element, of course, there was the sometimes explicit, sometimes implicit arguments that A) much of human behavior was poorly adapted to the modern world because evolution worked too slowly to have made appropriate adaptations to the modern world, and B) a political or ideological argument that certain social arrangements, such as the status of women, should not be tinkered with because to do so was to work contrary to evolutionary processes--Gould and Lewontin were not the only ones to turn to political arguments when it suited them.

I am not going to worry about the political side of this. I have already said some things about evolution itself, but just to recap, since the early days of EP we have learned a great deal more about the plasticity of the brain, the plasticity of behavior, the rate of change in evolutionary processes, and the construction of the human genome, all of which pose problems for the original sense of EP. Constraints on my own time and interests make it difficult for me to keep up with everything in this field, but I imagine that given the EP folks are all pretty smart and well informed I imagine that they have taken on these developments and have proposed ways to retain their basic model in the face of these challenges. But I would argue that a theory that requires a great deal of revision in the face of rapidly changing information on the fundamentals of the theory is not yet a theory. It is at best a working hypothesis. The EP folks are, I maintain, in the world of the interdisciplinary, and that carries a number of risks with it, as I have discussed in other posts. The interdisciplinary problem, however, becomes more acute as we move along. This is where the real problem of mind comes into play.

This is why I brought Chomsky up earlier. The real psychological model that is imported into EP, is the cognitive model, which has behind it the computational model advocated by Fodor and others. If you go to the Wikipedia article on Computational Theory of Mind you will find the following sentence, "This theory is common in modern cognitive psychology and is

presumed by theorists in evolutionary psychology." Basically, the computational theory of mind holds that the mind/brain system works like (in some more radical formulations is) a computer, manipulates symbols in the sense proposed by Turing, and solves problems though the application of algorithms. Now Fodor proposed that there were a few domain specific modules for a few--emphasis on a few--specific cognitive functions, most notably language processing, and that beyond that you sort of had a general purpose machine. It is the case that one of Fodor's objections to EP is that they take the step of insisting that there aren't just a few modules. The mind is, rather, massively modular. Their reasons for making this argument are that a general purpose computer would be overwhelmed by the computational complexity of the world if the world were not cut up into manageable segments with discrete algorithms designed by evolution to handle those discrete problems. It is worth reading Fodor's book, The Mind Doesn't Work That Way, regardless of whether you agree with him or not, because he is one of the most enjoyable writers around, but he is also not that easy to dismiss. But from my own point of view the computational model has a number of difficulties. To begin with, domain specificity is extremely difficult to define, once you get away from simply positing it. So let's take one of the favorites of the EP folks, mate selection. David Buss has a lot of interesting data on male preferences for female body shape, for example. So let's design an algorithm to calculate the ideal body shape and hold that data for future reference. There is a lot of recent research on pheromone detection and sexual arousal/preference, so we need an algorithm for that. Or do we have one algorithm that computes both body shape and pheromone detection--complicated that one. Ah, but Jack is willing to give a little on body shape if Jill is really intelligent, so we need to either work on the algorithm we have or we have to write another one for intelligence detection that feeds into mate selection, and modifies the valance of the body shape calculator some of the time, and into which psychology professor do I want to work with the rest of the time. In other words, one of the most serious problems with massive modularity and domain specificity is that once you actually try to think through what the system is going to look like you are in fact faced with precisely the same problems of computational complexity overload that the EP model was intended to avoid by positing massive modularity. Unless, of course, you take the position that human being do not operate in behaviorally complex ways, which is a stretch to say the least.

This is precisely the problem that Rodney Brooks faced when he made the radical proposal that the best way to solve the problem of making a robot that could function in a complex space was to take the cognitive processor out altogether, and just connect the sensors to the actuators. This is in fact what is going on in the robots I have referred to. Just to make this a little more clear, however, there is enough programing, of a sort in the box pushing robots to read something like "detect light", "turn to light", "move forward." However, the computational theory of mind folks had been trying to solve far more complex problems. David Marr, for example, had been working intensively on getting a computer to identify simple shapes. He was, if I remember correctly, working on how to get a program to compute conic sections based on images transmitted from a small television camera. At Stanford there were major dissertations and mountains of computer code being written by the students working on trying to get the so-called Stanford Cart to move slowly through a room with three or four large geometric shapes as obstacles. Success was nowhere in sight. Brooks, on

the other hand, was able to start robots moving through an actual office at the MIT Artificial Intelligence Lab with almost no programing at all by taking out the cognitive processor. Mind you, the cognitive processor, much like the domain specific module, was not just some actuator set such as Brooks used. The Cognitive Processor was in effect designed to say "Oh, there is an obstacle, let me compute its size and shape and plan--important to plan--a way to get around it, listen wheels, turn right, no left, go forward, no not so far, back up you idiot, not into the wall, where do you think you are going, no, that not-cognitive robot over there is not intelligent, I don't care if you like the shape of her wheels, we have to go around that cube standing in the way." Sorry, I am getting a bit tired, it is 12:30 AM in Zurich.

So, that said, let me stop here with a concluding remark or two and then try to pick up later. Since I am not really able to keep up with all the work in EP I cannot say with any certainty where they stand at this point with the massive domain specific module part of their original proposal. My point, however, and it is shared by others, is that this basic element of the proposed theory, is A) far more complicated than the EP folks either realize or are willing to admit. The strongly computational theory of mind in general is very problematic--and let me just note here if it is not already obvious, that many of my objections to EP are objections to the elements of the theory that have been woven together to make the model. In other words, I have real difficulty with the strong computational model of mind, and hence have difficulty with any theory that relies too heavily on the Strong Computational Theory. Quite frankly, my sense is that very few neuroscientists are inclined toward a real computational theory of mind any more--once upon a time, maybe, but too much neuroscience has come along that seems to point in other directions. Remember, when Harvey compared the heart to a pump, it was because the valved pump had only recently been invented, and you had a really close fit to the basic elements of the two systems. Computers, on the other hand, can "be" anything. For a while it might have been useful to think of the brain as a computer, but it appears less and less that this is the case. In the case of the mirror neurons, for example, a single neuron seems to respond instantly to a perception of an action on the part of another actor. There are all sorts of issues with neuroscience that no longer fit the computation model. It is also the case that while Harvey had an insight to the effect that the heart worked like a valved pump, very few cardiologists would turn to grandma's old hand pump to model the activity of the heart in this day and age. The big deal in cardiology these days are the people called electrophysiologists. I suspect they view the heart more as a circuit board rather than a pump. Anyway, perhaps this will help move things along. I have similar comments on a variety of other aspects of EP, but the bottom line, as I have said before, relies on Occam's razor rather than my political inclinations. The question I am asking is, given a form of human behavior, what is the simplest set of mechanisms you can specify that will give you that outcome. I am not necessarily objecting to the data they collect, although some of that bothers me as well. But if David Buss can find a statistically significant correlation between the length of certain bones in the male finger and reproductive success--he wrote something along those lines someplace, but again I am working from memory--then fine. I might want to check the data, reasonably enough, but that is not the point. The question is what sort of mechanism do we have to attribute to the observing Jill that connects her perception of the nature of Jack's fingers with her fertility and willingness to engage in reproductive activity. I do not have an

answer to this question, but I seriously doubt that we need to build a complex algorithm to figure it out.

Hope this helps,

G.

From: Peter Dunlap, 02.02.11 00:35:36

Dear George,

I appreciate the need to attend to the scaling issue between individual and cultural phenomena. Interest in connecting the two developmentally is long-standing. As you note,

"The notion that cultural artifacts, including myths, enjoy some meaningful form of evolutionary development is increasingly accepted...[and that] language...has evolved to work within the brain and developmental setting of the human infant...

To me, this statement implies a connection between individual development and cultural transformations. I like your deconstruction of "stages of development" and I wonder about its implications for conversation about the relationship between individual development and cultural transformation. You mention Erikson who did substantial work on this relationship including describing the way in which cultural leaders interact with culture in a way that transforms both. His approach focuses on the emergence of unique "capacities" that arise, perhaps, in what you're calling "attractor states within phase space." I suspect that this process reflects an analogous relationship between individual development and cultural transformation.

In my own research I am looking into the role of affect in capacity formation at both individual and group/cultural levels. This is not to assert much optimism, the issue of scale is well noted; however, it does imply direction for research.

The idea that individual psychotherapy for leaders certainly was way naive. The rupture of the Frankfurt school between Fromm and Horkheimer/Adona/Marcuse speaks to the confusion regarding how to apply the psychological attitude to culture. I see the divide within this institution to reflect the struggle to find a praxis of mutual transformation. Fromm advocating treating the individual while the others hoping that psychological analysis could precipitate a

cognitive clarity amongst students and the working class of Western culture and the third world that would lead to political revolution. What may have been missing from Habermas' theory of communicative action was an understanding of the psychocultural function of affect, which may be said to play a major role in transformation of both individual and cultural identities. This would be applicable as an explanatory tool for large scale transformations, such your mentioning of the advent of the Self in the Christian consciousness, but also for the individual in psychotherapy. And, this may also apply to a mid-range of transformative cultural experience.

Aftab Omer at Meridian University in California is looking at that mid-range of transformation. He discusses the way that acts of "cultural leadership" draw attention to and transform repressed affect, both individually and culturally. For example, the civil rights movement led by Martin Luther King and others drew attention to the shame numbness of the American people, which catalyzed a nascent conscience about the violence of racism. Gandhi's salt march also fits this frame. To accomplish this activists had to transform their own "fear" into "courage." Thus, transformations of affect into capacity takes place for the individual and culture through acts of leadership. Again, I'm not attempting a prescription for gaining conscious control over issues of scaling. Nevertheless, in my mind, this research speaks to the phenomena of emergence within the interaction between the individual and culture.

As Jung wrote:

It is obvious that a social group consisting of stunted individuals cannot be a healthy and viable institution; only a society that can preserve its internal cohesion and collective values, while at the same time granting the individual to greatest possible freedom, has any prospect of enduring vitality. As the individual is not just a single, separate being, but by his very existence presupposes a collective relationship, it follows that the process of individuation must lead to more intense and broader collective relationships and not to isolation (Jung Volume 6, 758).

Thanks again for your depth perspective regarding emergence,

Peter T. Dunlap

From: **Mark Saban, 02.02.11 01:38:57**

Dear George,

Thank you for engaging us in this stimulating and fascinating review of archetypal theory. I have also been reading your chapter on Archetypes: emergence and the psyche's deep structure in the Routledge volume Analytical Psychology, contemporary perspectives in Jungian analysis, ed. Cambray and Carter, which I found very helpful in clarifying aspects of your argument. However, I do have a few questions about details in that argument. Others reading this may not have read the chapter in question, so I shall briefly recap the main points, with a few comments of my own in square brackets.

There, and elsewhere, you cite Oyama's argument that there is an entrenched 'bias' in occidental thought which assumes that behind the appearance of phenomena there must be some kind of plan, blueprint, or structure. As you go on to outline, this bias becomes characteristic of western ways of thinking about the world, and man's place in it, and it penetrates much of theology, philosophy and scientific thinking.

[Bound up with these grounding ideas are various important oppositional binaries, for example, appearance (superficial – bad) vs. reality (deep - good), and what has been described as the 'metaphysics of presence' - an approach which, in our example, gives far more ontological weight to the deep structural aspects of things (e.g. Plato's forms, the archetype In itself) than to the phenomenal aspect of things (the image). What also gets given great weight is the notion of 'origin'. As Derrida points out, the Greek word arkhe contains two principles in one: "the principle according to nature or history, there where things commence - physical, historical, or ontological principle - but also the principle according to the law, there where men and gods command, there where authority, social order are exercised, in this place from which order is given - nomological principle". So the arkhe is not only about where things come from, but how they ought to be. It imposes rules, limits and boundaries.]

You draw a distinction between two contrasting understandings of the archetype, both of which, you go on to claim, later contribute to Jung's writings on the concept of the archetype. One model of the archetype you characterise as fundamentally structural and the other fundamental processual.

Your example of the first, structural model is that of 19th century anatomist and paeleontologist Richard Owen, who used the term archetype in the service of establishing a taxonomy of species. Owen's archetypes were part of an overarching static structure into which any example, even newly discovered species, could be slotted. As you show, Jung sometimes talked about archetypes in this way, and certainly many of his followers have taken up this approach.

Your example of the second, dynamic model is that of Goethe who thought "that a complete, or holistic, comprehension of a given natural state entailed an aesthetic as well as a teleological point of view, and that one approached the ur-form of a phenomenon by way of examining the changes or metamorphoses in a given form." For Goethe the archetype "would be more than a simple pattern useful for comparative zoology: it would be a dynamic force actually resident in nature, under whose power creatures would come to exist and develop". This approach to the archetype is, as you show, also to be found in Jung. However, as I understand it, your argument is that the two different understandings of archetype are

fundamentally incompatible. We may prefer one version or the other, but if we try to include both, we end up with an incoherent theory, and this is in fact what we find in Jung's various writings on the archetype.

Goethe's notion of the archetype is one which you clearly favour, as most resembling that of your own notion of archetype as emergent. What was not quite clear to me was to what extent you saw Goethe's notion of the archetype as an influence on modern emergence theory, a kind of ur-emergence, or alternatively as a theory which happened to coincide in certain ways with modern 'emergence' but which is otherwise unrelated. As far as I am aware Goethe's scientific theories were never taken seriously by the mainstream of scientific thinking.

At any rate, your argument, as I understand it, depends upon a strong opposition between the dynamic processual approach to the archetype and the static structural approach: "the archetype as the least common denominator or the basic form versus the dynamics of the metamorphosis of the system as a whole".

This argument is elegant and persuasive, but I find myself with a few doubts: in brief, I wonder if it relies upon a certain rhetorical simplification of the issues involved.

For one thing, I am not entirely convinced that the two approaches are actually as distinct and contradictory as your characterisation makes them out to be. I am reminded of Hillman's writing on Puer and Senex. Hillman makes the important point that, while there is a tendency to represent these archetypal tendencies as mutually exclusive (and such a formulation generally encourages a falling one way or the other), they are actually two poles of a single archetype and therefore, on closer examination, may be seen to be woven together in all kinds of complex ways, and also crucially depend upon each other for meaning. There is often a strong temptation to split any given archetypal constellation into opposing and mutually exclusive fields, but if we do so we tend to lose the tension between them, and therefore the energies which are to be found within that tension.

Indeed one could, without too much distortion, represent Owen's emphasis on the static and structural backward-looking aspect of the archetype as a senex-oriented approach, and Goethe's emphasis on "Formation, transformation,Eternal Mind's eternal recreation" as primarily a puer-oriented approach. Emergence theory seems to fall squarely into the latter category, playing as it does on notions of creativity, spontaneity and an un-tethering from senex notions of determinism and predictability. It is hugely attractive, as puer formulations tend to be, and encourages a feeling of release and freedom from old and oppressive structure. Your opposition of Owen against Goethe subtly underwrites the feeling tones of your argument. Owen is a perfect image of the dead hand of the senex in science: the yesterday man who resisted Darwin's evolution, while Goethe is the renaissance man of German romanticism, bursting with puer-creativity, and perhaps the last man to credibly maintain a vision of a unified field containing both science and the arts.

Your polite but firm resistance to Jean Knox's compromise position stems from your argument that such a compromise leaves the emergent nature of the archetype contaminated by residual archetype-as structure thinking, and even the Skar/Saunders formulation is

insufficiently radical for you. My sense is that your intuition is correct here: there is something unsatisfactory about formulating the archetypal through, as it were, the addition of archetype-as-structure to archetype-as-process. To do so is to work on an ontic and linear level, whereas what is required is step in an ontological dimension.

However, to my mind, cutting out archetype-as-structure entirely is not, I think, a truly radical way to go, at least in the way that I read Jung as being radical. What needs to happen, and what Jung attempts to do, though admittedly in what is often an insufficiently articulated way, is a paradoxical holding together of the two opposite versions of the archetype, and a consequent unfolding of the uncomfortable energies released from such a meeting.

Read from this perspective Oyama is quite right to point out the bias of the western intellectual tradition in favour of a conceptual approach that valorises hidden structure. It would however be wrong to deduce from this that it would be preferable or even possible to eliminate such a bias in a return to a kind of conceptual year zero ushering in a new age of emergence. The senex vision of deep structure is not to be annihilated so easily, as Nietzsche, Heidegger and many others have found. The fundamental problem to be solved is not that of structure (or of anti-structure), but that of a monolithic attachment to any single vision of reality and a consequent refusal to accept the difficult paradoxes and aporias which always accompany a more complex nuanced being in the world.

Thank you for opening up the space to try to think these problems.

Best wishes

Mark Saban

Oxford

From: **Barbara Miller, 02.02.11 18:26:01**

Dear George, Peter and Mark,

According to Brad Shore (1996) to study the place of culture in mind requires the coordination of concepts from different disciplines as well as relating models at different levels of abstraction and organization ("...levels of analysis, each with emergent properties" p.343.).

Shore delves deeply into some of our concerns, for example to define 'archetype an sich' (without employing the term, of course), Mark's static and dynamic, Peter's the role of affect ("Lévy-Bruhl's notion of "participation" suggests that certain cultural models (rather than

certain mental endowments) promote the perception of powerful identifications between disparate phenomena" p. 314).

Shore's book is exceptionally useful for exploring meaning construction. Take for example: "Mimetic representation and analogic processing [the mimetic level of representation that forms the most basic medium of human communication]....Mimetic representation is distinct from literal mimicry or simple imitation in that it involves the invention of intentional representations...Rather than simple copies, mimetic representations are recreations of perceptual models through analogical schematization" and "[Using Donald (1991)] The supramodal of mimetic representations suggests to Donald the existence in the brain of a central mimetic controller...this mimetic controller would likely have evolved as an unencapsulated central system, a kind of association area, integrating perceptions from numerous sensory and motor modalities" (Shore, p. 320).

I limit my quoting to the above excerpt, using it to contextualize my postulate for when to use "archetype an sich": I follow Skar and Saunders (my simplification) in saying we only need Jung's concept of the complex. And add "archetype an sich" could be used to refer to the move and parameters of organizing experience associatively.

We could also struggle with whether we find "foundational schema" as defined by Shore an adequate expression for what we mean by "archetype" and how to be more disciplined in our use of "archetype". Shore: "For both mental and instituted models, we need to distinguish between abstract global models and more concrete and particular instantiations of those models. I call the more general and abstract forms foundational schemas, reserving the term "model" for the particular and more concrete instantiations of those schemas" (p. 53). I would argue that yes we can use foundational schema; when I bump into a foundational schema the experience is (often) numinous.

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Sincerely, Barbara

Barbara H. Miller writing from Hilversum, the Netherlands

From: **Elizabeth Brodersen, 02.02.11 18:27:27**

Dear George and all.

Thank you for engaging so readily with my comments.

I do find the work you are exploring on emergence very stimulating. What is sometimes missing for me, though, is that leap out of theoretical discussions about the objective psyche and into a discussion of the practice of working with the symbols as they appear in dreams, active imagination or any creative art form from analysands as a personalised experience. For example, to take the the amplification of a dream you mention where the dreamer threw a rock through a church window, I would not jump immediately into a meaning of the rock as Peter or the philosopher's stone, although they are important as amplifications; I would first ground the associations in the personal before amplifying the associations for archetypal sources.

For example, what happened to the dreamer the day before to ignite such anger? What colour clothes was the dreamer wearing? What type of stone was it, big, small, rough, smooth, black, grey? What type of church- catholic, protestant, mormon, methodist? Was the window wholly or partially broken? Was it a stained- glass window? Where was the church in town or in a forest? How did the dreamer feel -courageous/frightened/angry/pleased- when she/he threw the rock? A request for detail helps the ego differentiate unconscious energy so that amplifications becomes more grounded in a differentiated, personal response, better able to challenge archetypal, collective belief systems of the 'self.' In my experience, analysands come to analysis because they lack a personalised response to collective structures, such as 'god, good and evil. ' This response has never been asked of them, but, suddenly through suffering an overwhelming loss (intra-psychic or interpersonal) they now need it. I notice that dreams take on more structured, precise, imaginative forms when the unconscious recognises that differentiation is welcome. Interest stimulates interest: unconscious images animate, they start dressing up! I find it important to request colour, texture, shape, even smell; then an emotional, repressed image of the 'other' can take shape, often for the first time, not as a 'collective' image of an archetype but as a personification of real, individual energy.

All theoretical knowledge helps, whether it is from the arts or sciences, but it does not replace that defining moment when the 'shadow' repressed, unconscious energy as 'other' hits you in analysis. Then you look around for any means that help channel it constructively with what ever conscious/unconscious tools you and the analysand have at hand. In my personal experience, if the force of that repressed energy and the differences contained within it, does not 'knock you out,' it won't 'knock out' the analysand either and transformation can occur! That stone becomes the first building brick. Building up good defence mechanisms through theory and use of interpretative methods helps, but can also hinder/block/miss that new, defining, experiential moment. Jung has been criticised for being 'unreliable' on use of his sources, or as a 'misreader' as Mark points out, but he was fully there, I would imagine, precisely in that transforming, mercurial moment when differences collide, stabilise

and then re-form into creative patterns that contain new solutions to new and old wounds. I find that work very inspiring.

Coming to the last point, like you, I don't think that Jungian analysts compete with each-other for the best interpretation either. They try to offer an interpretative method that meets/fits a particular unconscious requirement. I enjoyed reading both Byron's and Maryann's interpretations of the Pinocchio dream as I did your explanation of Zipf's law and the amplification of the stone thrower. I was making my point to counteract Robert's ever provocative use of 'logic'! I think we all bring in our interpretative methods, whether from the sciences or the humanities, to expand discussion. My own emphasis is on the suffering that is caused through social and economic injustices, often supported through belief systems, and how inequality works on the psyche in the form of scape-goating, whether 'shadow' or/and contra-sexual 'other' as the 'devil,' when such injustices are not consciously addressed. Other analysts emphasise different aspects pertaining to their own fields and fruitfully widen the discussion that way. My own is that symbols establish new meaning through widening consciousness to include 'difference' that attempt to ameliorate individual suffering and promote a call for social change by deconstructing old, warn-out, cloning, collective models of 'sameness.'

All best wishes, Liz

From: **Vincenzo Sanguineti, 03.02.11 20:17:16**

Liz, What a wonderful comment!

The unavoidable, ever-present, all- around effect of conscious and unconscious mental images and affects that each human mind experiences at all times and that continuously recategorize reality: from the symbiotic mother to the color of a dress, the light through a window, the look from a stranger, the “scent of a woman”, a dream.

Perhaps (or probably?) the world each mind strives to live in is not as much the world of archetypes as it is the world of individualized adaptations to/of the archetypal motifs. Adaptations that are unique to each psyche, resonant to others and yet always significantly different, as even identical twins are; driven primarily by affective energy (as psychology AND neurology continue to demonstrate): what Gelernter called “The Muse in the Machine” when he described how logic -- a powerful evolutionary tool -- is not creative while the world of sensation/ affect is.

The energetic gasoline may come from a common archetypal pump, objectively describable; but what really counts is the fate of each car and its occupants, and all those fates are unique and not replicable (it is always a source of complex feelings to sit as therapist in a passenger’s seat and truly experience the journey and the company).

Thanks

From: **Nick Stratton, 03.02.11 20:18:19**

Emergence debate

Dear George

Many thanks for your responses to my earlier contribution. I still consider the archetype system alive and well, especially when 'externalised' to act as engager with the world. Perhaps it is this which is subsequently internalised as individuation.

To me, as an ex-chemist, treating structure and process as independent alternatives seems alien. Molecules have structures which impact on their reactions (processes). The same applies to neurons and brain architecture generally. Hence I do not see that innate propensities are incompatible with emergence of capabilities. I am in complete agreement with Matt Koeske on this. Present day psychology is primarily interactionist: 'nature AND nurture', having recovered from Behaviorism. Incidentally, many cognitive psychologists did not welcome the resurgence of evolutionary psychology, as they perceived it is as dangerously irrational!

We each have our primary perspective regarding theory, whether (say) biological, psychological or sociological, amongst many others. Each of these may have differing methodologies, but the resulting theories share a similar set of virtues: elegance/simplicity, testability, good evidential fit, plausibility, explanatory power, compatibility with further theories. It's early days to place this burden on robotics.

Jung's grand scheme (the collective unconscious) rests on a variety of evidence largely arising from his psychiatric practice. He attempts to classify archetypes according to function. We should pursue this in order to gain a tighter grip, e.g. archetypes concerning self-identity, social projections, group bonding, intra-psychic change agents and motifs. Jung's theory (as presented by him) depends on support from e.g. evolution and mythology, i.e. essentially 'historical' and so suffers from obvious evidential limitations. It also lacks simplicity (as you point out) but there is a trade-off in terms of stability (think of the three-legged stool).

By way of illustration, I would like to focus on two emerging issues: accelerated evolution and emotion and robotics.

Accelerated evolution: the cheetah and the gazelle

Ethologist Patrick Bateson (2009: 68):

‘The gazelle on which the crouching cheetah has fixed her gaze may suddenly jump into the air. The cheetah relaxes and turns her head, searching for another gazelle. The curious leap of the gazelle when approached by a predator is known a 'stotting'. The leap indicates to the cheetah, or so we suppose, that she is less likely to catch that gazelle than one that does not jump or does not jump so high.’

Bateson explains:

Genetic change to the gazelle will occur because the important thing is to stand out from the crowd. It has no chance to learn to stott. Whereas the cheetah has the opportunity to learn to avoid the stotter. The experienced cheetah is thus a driver of genetic change in the gazelle. Bateson notes how learning acts as an 'adaptability driver' and accounts for the exceptionally rapid evolution of humankind. Socialised learning is a yet further accelerant. I would observe that we are part gazelle (non-learning, autonomous system a la collective unconscious) and part cheetah (analytic, learning system).

Emotions and Robotics: a matter of resources?

With my liking for emotions and yours for robotics, perhaps we can explore common ground via the veteran AI psychologist Marvin Minsky and his 2006 book The Emotion Machine. His general model of the mind is multi-layered, whereby successive layers incorporate pluralities of Critics, which monitor and moderate prior layers (p105):

[Layered ‘Ways of Thinking’]

self-conscious emotion

self-reflective thinking

reflective thinking

deliberative thinking

learned reactions

instinctive reactions.

Each layer comprises a set of resources which can be selected (turned on or off) by a Critic, in order to tackle a problem, whether through cognition or emotion. [Each Critic is a problem-specific specialist.] The Critic (a) recognises ‘its’ problem, (b) engages a set of resources (and inhibits others) to (c) solve the problem. Some Critics are built in from birth. ‘Anger and Fear evolved for defence and protection, while Hunger and Thirst evolved for nutrition.’ In case of obsessiveness or excess, there has been a failure to suppress certain resources. Note that bodily resources can also be recruited, hence visceral affects. To sum up, in Minsky’s view there is nothing special, in terms of process, about emotions. Note that though any acquired (or emergent?) emotions would build on experience, they presumably still include resources that generate feelings, probably including basic innate emotions, for reasons of continuity and efficiency.

If we apply Minsky's approach to Jungian archetypes, we have the equivalences:

an archetype constellates/identifies a situation (the problem) – say an opportunity to promote social cohesion (this may be subdivided into a range of more specific situations/problems). This specifies the function of the Critic;

the relevant feeling-toned complex is activated – engaging the germane resources and generating a characteristic archetypal feeling of, say 'being merged' (by-product of the emotion);

a characteristic product is the end-result (problem solution). In the present case this would amount to increased social cohesion.

A good example would be a concert given by the Simon Bolivar Youth Orchestra at the Royal Albert Hall (capacity 6000) in London 2 years ago. The audience and the orchestra were mutually enraptured. A variety of factors contributed – in particular the enthusiasm of the orchestra and conductor (Dudamel), the audience's knowledge of the orchestra's origins (slums of Buenos Aires), the size, circularity and colour (red) of the hall, the size of the audience, and not least the music. This particular 'bringing together' and 'expanded identity' is permanently incised on the participants' memory. Participation mystique with a vengeance!

Many thanks

Nick Stratton

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From: **George Hogenson, 05.02.11 07:26:38**

Dear all—

I am going to take some time and try to catch up with the many interesting questions on the table. To do this I will be working thought a series of posts individually, so there may be some redundancy. I hope that is not a problem.

Beginning then with **Susan Rowland**'s post of January 30th: first off, in the interest of bibliography building, you might enjoy reading a book by Depew and Weber, Darwinism Evolving (Depew & Weber, 1996) as well as a volume they edited, Evolution and Learning

(Depew & Weber, 2003). In the latter volume, Terrence Deacon has a paper entitled "Multilevel Selection in a Complex Adaptive System: The Problem of Language Origins." Deacon is very interesting on this subject, and does take a serious interest in the question of levels in the process of emergence. You are, however, looking for something more, I take it.

So, intuition, the unconscious, the genuine other. Jung, of course, defines intuition as one of the irrational functions, sensation being the other one. To me, the distinction between the rational and the irrational functions in the typology has always been a matter of whether or not you could give an account of the reasons for a certain conclusion. In the thinking and feeling functions, reasons can be given for the conclusions arrived at in a given situation. With sensation and intuition, if reasons are attempted, they usually sound contrived and fail to satisfy. It seems as though the intuitive "just knows" something. My own sense is that the intuitive is actually assembling a great deal of available data into a coherent and usually accurate pattern, but this is going on unconsciously. In other words, it is not pre-cognition or some other magical ability, but it is a process that goes on out of sight. This is not unlike being asked for a name or a phone number which you simply cannot recall at the time of being asked, but a couple of hours later, when you had completely forgotten that you had been asked in the first place, the name or number suddenly pops into your head. Now clearly, an unconscious process has taken place. But if we are going to talk about the dynamic unconscious we would have to give some account of why the number or name was not immediately available in the first place—an account, that is, that goes beyond positing that the homunculus who keeps the filing system in your head can't find the right file cabinet. This would be the more or less classical Freudian explanation for a parapraxis—you really have a grievance against the person asked about, or alternatively you are secretly and illicitly in love with that person, and therefore the name cannot be recalled. It always fascinates me how illicit love fantasies must multiply exponentially with age, given that forgetting names becomes a major problem as you get older.

It seems to me that emergence relates to intuition and creativity by way of ambiguity. I am not so sure that language is inherently opaque, or "not transparent" as it is necessarily ambiguous. I say necessarily because this appears to be one of the issues raised by Zipf. I have already mentioned the principle of least effort, which posits that the speaker will expend as little effort as possible to communicate, and likewise the listener. The net result of this principle of conservation is that language lacks the specificity of either animal calls, which are directly attached to the signified, or total randomness, where no information is communicated at all. I suppose that this comes close to the crucial notion of the surplus of meaning in deconstruction, a way of thinking about ambiguity and the transcendence of the authorial voice. Really great poetry emerges, one could say, precisely from within those interstitial ambiguities inherent in language. Now, can I actually use the term emergence for this phenomenon? I am a little reluctant to go this route, because it can sound reductive, but it does seem to me that there is at least an analogical relationship to many other emergent phenomena. Not the least that a more complex meaning can supervene on the manifest meaning of a text, becoming, in the process, an entirely new phenomenon. One of the elements you will find in Deacon's work, however, is the relationship of emergence to the process of amplification, which is at the heart of Jung's analytical system.

Now, regarding emergence and the genuine other, I suppose that that technical way of responding to this question is to invoke something like a limit state. Where a process of emergence comes to its limit state, in other words, a boundary in its own unfolding, there you encounter the other. Taking up the lines you quote from my paper Archetypes as Action Patterns, I believe there is a Rabbinic Midrash on Exodus 33:21-23 which maintains that Moses can only see the back of God because God is always moving forward in history. God always goes before Moses, and Moses can only follow. To some degree, it is the idea of the limit state, of the wholly Other, that I hope to be able to address in my Fay lectures, where I intend to directly address the question of the sacred, beginning with the question of emergence. Thus, I fear I will have to ask you indulgence for the time being, while I figure all this out.

Chad Engers:

Very interesting questions: let me start by trying to draw a distinction on the question of how I use science. This may not work, but I it is how I am thinking about some of this. If you go to the Jung/Pauli correspondence, you will, I believe, see Jung falling into the same trap Freud fell into when he tried to appropriate 19th Century science. Jung is always pushing for an analogy, if not a direct correspondence between quantum mechanics and synchronicity. Pauli, on the other hand, is always trying to get Jung to understand the nature of the statistical analysis that makes quantum mechanics work. Susan Gieser, in her indispensible book, The Innermost Kernel (Gieser, 2005), makes the point that as observations at the quantum level accumulate, they tend to converge toward the norms of classical mechanics. Pauli is always emphasizing methodology, Jung wants to settle on single findings—it is sort of a Jungian apologetics carried out by Jung, and Pauli consistently resists the temptation.

In my own work, I am actually more interested in the processes involved in emergence, dynamic systems theory or with Zipf's law—fractals—than I am with the substantial finds in some of the areas I reference. Thus, I do not think that human beings are simple robots. The point of the robot video is to show just how simple the foundations of a complex behavior can be. The robots are what some researchers call existence proofs—in other words, they show possibilities. Much like quantum mechanics and Pauli, complex dynamic systems theory, emergence, fractals, etc, are first of all based on mathematical analyses that describe a wide range of phenomena. For whatever reason, Zipf's law seems to predict the distribution patterns that form in the size of cities, the intensity of earthquakes, and the frequency of words in a text amongst many other things. In passing, the best book to read on this subject, with a particularly telling title, is Per Bak's How Nature Works (Bak, 1996). What I am proposing here, then, is a distinction between proposed substantive findings and methodologies. It may not be a completely satisfactory distinction in all cases, but I think it is helpful. Thus, if Freud had proposed that the unconscious unfolds in accordance with natural selection—Darwin's methodological proposition—he would have been on much more solid

ground than he was by taking up the notion that experiences created transmissible particles that formed the germ cells—also from Darwin, as it happens.

This brings us to the question of whether I am being literal or metaphoric in my use of contemporary science. By and large, the work of the last ten years has been pretty much literal, given the distinctions drawn above. I think it is very important to remember that given the worldview we inhabit at this point, you have to be able to engage in a serious way with the fact that any experience to which we lay claim is, in some degree, implemented within the organism—I do not want to limit things entirely to the brain, but pretty close. I tell trainees in Chicago that in order to be a competent analyst or therapist they do need to develop a coherent theory of mind. This does not entail biological reductionism, but the brain or the neurosciences do figure in there someplace. I would not, however, extend that imperative to other disciplines. I don't think you need to have a complex, clinically informed, theory of mind to study penitential poetry. I may be wrong, and I would defer to you on this, but I do not think it is necessary in the same sense that I am using it.

On the other hand, I would like to think that the work I am doing in the two papers with which we started this seminar could perhaps contribute to the understanding of penitential poetry, largely through the agency of the notion of symbolic density—or Marion's saturated phenomena. Going back to Susan's post for a moment, I believe it was Walter Ong who proposed that in an oral tradition you do get some very strong selection pressures on how a story is told, a kind of Dawinism in language—I have no idea how this relates to the literary Darwinism she mentions, it is more a matter of the oral poet working and re-working his material to keep the audience engaged. If you have ever listened to a reading of the Iliad you will, I believe, hear the results of that selection process and, I would say, experience a moment of symbolic density.

How does this all apply to your first questions regarding alchemy? Jung's argument, of course, is that many of the alchemists were in fact engaged in a kind of auto-analysis—call it individuation if you want—by way of projection into the materials with which they worked. Keep in mind that projection is the critical mechanism in Jung's work, as distinct from repression in Jung. I discuss this at some length in my book on Jung and Freud, where I draw a distinction between Freud's notion of primal repression, and what I call Jung's notion of primal projection (Hogenson, 1994). You cannot understand what Jung is doing with the history of alchemy without getting the projection part right. Jung argues that if you read the alchemists with the notion of projection in mind you will see that the processes they describe are similar to, if not identical with, the processes observed in analysis. My own experience is that things may not be quite so clear-cut, but there is a fair amount of correspondence. In other words, Jung may not be far off in his reading of at least some of the alchemists. This qualification may be necessary because a number of alchemists were unquestionably charlatans, some were accidentally successful at making valuable products, such as porcelain, and probably only a few were really involved in some sort of spiritual project. I have also always had the suspicion that quite a few of them were probably having visions induced by the materials they were working with. I know of at least one alchemist who was reputed to

have carried on a continuous distillation of mercury for 13 years. His brain, to be neurological for a moment, must have looked like swiss cheese.

The point here is that Jung is not exactly being "interdisciplinary" in his use of alchemy, neither is he simply being metaphorical. He is in fact making an argument that there are processes of psychological development, or analysis, or growth, or whatever that exist in all times and places, that they show relatively cognate features, and can be compared to one another. It is sort of an archetypal argument, but not exactly, and one would have to evaluate it with some care. Jung also argued that alchemy had the unique historical advantage precisely of coming in fairly close to the modern sciences, but being sufficiently distant both temporally and conceptually to get some degree of perspective on what they were doing. To be fair, there are some historians of science specializing in alchemy who think Jung was nuts, but in reading them I find some serious difficulties with their understanding of what Jung was proposing (Newman & Principe, 2005). On the other hand, historians such as Betty Jo Teeter Dobbs were very well disposed to Jung's interpretation of alchemy (Dobbs, 1975).

It seems to me that your reference to prudential decisions in making crossovers to other disciplines is your best guide. But this brings me to "behindism." (I have a very good friend who suggests that we have spent enough time with post-modernism, and so it is now time for pre-nextism.) This is, curiously enough, where folks in literature or other disciplines can get into difficulty with adopting Jungian terms, in a form of interdisciplinary work. The point of my work, and that of Jean Knox and others is that the field of Jungian theory is somewhat up for grabs right now. I am not at all sure that my assertion from 2001 that the archetypes do not exist will stand up in Jungian circles, and it is the case that I disagree with Jean on her proposal that the archetypes in themselves are the image schemas of her developmental model. Nevertheless, Jungian theory is not a calm and settled place at the moment, and therefore some care is probably required when adopting some of the classic terminology for other disciplines.

But enough for now, I need a break and will then try to take up a few more questions.

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From: **Matt Koeske, 08.02.11 17:36:38**

Dear George,

Many thanks for your reply. I apologize for my delayed response. I did write a longer post addressing most of the comments in your last email to me (1/31), but after reflection, I felt that I was essentially repeating the thesis from my first post. I.e., I believe that the dismissal of EP you (and the other emergentist/developmentalist writers involved in the debate in The Journal of Analytical Psychology) make is founded on a misrepresentation of EP. Anyone interested in investigating this further could begin by following the various links I posted in my first reply. I believe that analytical psychologists (who should ideally be neutral evaluators and psychological observers in a debate taking place outside their field) have an obligation to craft their responses to what EPs actually say about EP instead of basing their construction of EP on what critics like Gould and Fodor claim (erroneously) EP is.

But I know you are not that interested in EP, and (although you brought the subject up) a deeper discussion of EP is tangential to your emergence seminar. Therefore, I'm happy to leave this aside for now and shift focus. Where the concept of emergence is employed, I feel it is always important to ask what precisely it is accounting for. In phenomena where emergence is demonstrable or at least arguable, there are still many contributing factors to analyze. The whole system may become "more" or different than the sum of its parts, but the parts don't disappear, and the whole remains founded on the organization of those parts. This vision of emergence must be differentiated from an emergence where something comes from nothing, where mysteriously or miraculously, deus ex machina, complexity emerges. That miraculous emergence is difficult to argue for or demonstrate. In most cases, an issue of perception and perspective is enabling the human mind to see emergence (pattern recognition) where science may be unable to demonstrate actual emergence (where the novel phenomenon influences the system it emerged from).

This would be the case in your own robot example. It would be incorrect there to say that "cooperation" emerged from simple individual behaviors. We (humans) may recognize a cooperation pattern, because we are cooperators, social animals . . . but scientifically

speaking, the robots are not cooperating as we would understand the term (and their "cooperation" is extremely inefficient compared to genuine cooperation). So what emerges is primarily a projection of sorts. In some of the writings on emergence I've stumbled across, the perception of emergence (based on hyperactive human pattern recognition or projection) is used as "evidence" of emergence. I think analytical psychologists should be leery of the psychological phenomena of miraculous and perceptual emergence. The employment of these constructions of emergence in the attempt to understand the psyche is bound to lead to metaphysical and unscientific theories. Jungians have plenty of these already, and it would be very tempting to enlist or appropriate the trendy, quasi-scientific concept of emergence to the side of preexisting Jungian biases.

I don't mean to conflate what I'm calling "miraculous emergence" with so-called "strong emergence" or to imply that scientifically verifiable emergence is equivalent to "weak emergence". I don't reject that scientific potential of strong emergence. By "miraculous emergence", I mean a psychological phenomenon where the term emergence is used as a place holder for phenomena we do not yet understand or refuse to look into more scientifically.

Psyche or mind is an especially slippery area in which to observe emergence. I don't find it satisfactory to merely say that psyche miraculously emerges from the brain. We can't close the door on trying to investigate how this emergence of mind from brain actually happens. Psyche is not something from nothing or something totally novel/different from the mechanics and physiological constraints of the brain. But I would agree that psyche/mind is an emergent phenomenon, specifically because it seems to play an important role in the actual structuring of neuronal connections and is not merely an epiphenomenon. But studying psyche apart from a study of brain (and evolved physiology in general) . . . as, if I understand him correctly, Wolfgang Giegerich proposes . . . seems to me to place unnecessary and ultimately misleading constraints on psychology.

Where archetypal phenomena are concerned, I think the concept of emergence is trickier to usefully apply. Certainly, much of what shapes archetypal phenomena ("archetypal images", that is) is learned, and learning is not the same thing as emergence. For archetypal phenomena to be considered emergent, they would have to be novel in the system from which they emerged. This seems to me impossible to prove (i.e., that archetypal phenomena are novel in the system of psyche instead of functioning as structural elements of psyche). For instance (as Jung hypothesizes), archetypal phenomena could be founded in, and at least partially organized by, heritable "instincts". The question to wrestle with is: "What makes archetypal phenomena patterned?" It is insufficient to answer this question with the one word "emergence", because that is no different than invoking miracle or divine intervention.

It would be useful to make a more systematic study of archetypal phenomena . . . perhaps constructing a taxonomy. With the data on archetypal phenomena laid out in front of us in an organized fashion like this, we may be able to learn things about archetypal patterning that were not apparent in the more haphazard speculation on archetypes that has characterized Jungian studies of the phenomena thus far. With this hypothetical taxonomy of archetypes

available to us, we may begin to better test Jung's claim that archetypes are based in instincts. For example, we could try to determine if the patterning of archetypal phenomena really do cluster around patterns of behavior and belief especially important to survival and adaptation, behaviors that could arguably be said to be affected by natural selection. If we found such a correlation, Jung's nativism might deserve a second look (even if extensive revisions to its construction were required).

Alternatively, we might find that most archetypal phenomena seem to cluster around patterns of thought and behavior that appear to have no real survival/adaptation function. That could be used as a reason to further abandon a nativist model of psyche and emphasize developmental explanations even more. Another alternative that comes to mind would be the possibility that archetypal phenomena demonstrate patterning consistent with the structure of complex dynamic systems in general (more so than either learned social behavior or potentially innately predisposed behavior).

But any such study and hypothesis testing would have to begin in the organized investigation of archetypal phenomena . . . by collecting, looking at, and analyzing the data. Currently, emergentist and nativist archetypal theories remain as untested hypotheses. They are only abstract philosophical speculations. I think at least one or two other members have asked for some kind of example of how emergence could be said to construct archetype. I agree that this is the place to start. We need to look at actual phenomena . . . a clinical example, a dream, a myth or folktale, a literary work, a film, etc. If anyone could contribute such an example, maybe we could set to work testing it for signs of emergence (and perhaps also for signs of innateness or other patterning)?

Best regards,

Matt

From: George Hogenson, 09.02.11 21:15:31

Note: I was using a cut and paste device to capture the passage from Jung's "On the Nature of the Psyche" regarding leaf-cutting ants, and now find that while it did translate to the E-Mail system at this end, it apparently did not survive the transmission. Rather than simply send the quotation, I have typed it into the text, which I now resend. Apologies for cluttering up your mailboxes, but since this seminar is something of a record I think it is best to have everything in order.

Best,

G.

Dear All—

Regrettably, I am coming close to the point where I have to terminate my participation in this seminar due to the press of other obligations. Fortunately, I an now back in Chicago and not writing at midnight, so perhaps I can get some clarity into the discussion that has been lacking up to now. To that end this post will be largely a response to Matt's last post, which sets up a number of issues worth considering and clearly in need of further comment. I am going to skip over the discussion of EP for the moment, and take up Matt's questions regarding emergence. I may then come back to EP briefly, because I do not believe Matt has grasped my position on the matter. But first to his questions and comments regarding emergence:

Let me start with the robots. To be clear, I do not claim that they are cooperating with one another. Neither does their creator, Professor Kube. What he set out to do was study "cooperative behavior" within the framework defined by Brooks, i.e. a framework within which simple sensor/actuator links give rise to patterns of action that "successfully" accomplish some task—wall following is another one. What is important here is that there is no "cognitive module or processor" that defines the behavior before it is undertaken, something inside that says, "We need to cooperate and here is how we do it." So let's not start by getting in an argument about whether or not I am attributing a complex cognitive function to the robots. I most emphatically am not, and I thought I made this clear at the beginning, but evidently I failed.

So what is the significance of this little demonstration? Again, I thought I made this clear by introducing the work of Kaye and Wells on nursing behavior. The argument there is that the innate nursing pattern of the neonate is no more "cognitive" in nature than the "cooperation" of the robots. Thelen and Smith have done an enormous amount of work on a variety of action patterns in infants that appear to the adult caregiver to be purposeful and complex when in fact they are simple and meaningless, in themselves. The point of the robots example in my work is precisely to highlight the importance of attribution errors in developmental situations. This is not exactly what you refer to as pattern recognition, or pattern attribution, which plays an important role in Dennett's critique of religious beliefs, but it is in the same vicinity. What is important here is that you can get complex developmental outcomes from simple, innate, action patterns in the infant, coupled to complex intentional attributions on the part of the adult caregiver.

Why is this important? Basically, in developmental psychology an emergence model cuts against a maturation model. Maturation models take the position that the neonate possesses some form of proto-behavioral scripts that mature over time and develop into adult behavioral and cognitive functions. In the introduction to their book, A Dynamic Systems Approach to the Development of Cognition and Action (Smith & Thelen, 1998), Thelen and Smith write:

What we argue in this book is that while the endpoints of human development are complex and unique, the processes by which we reach those endpoints are the same as those that

govern development in even simple organisms, and to some degree, even in complex, nonliving systems. (p. xii)

A little further along they write:

We propose here a radical departure from current cognitive theory. Although behavior and development appear structured, there are no structures. Although behavior and development appear rule-driven, there are no rules. There is complexity. There is a multiple, parallel, and continuously dynamic interplay of perception and action, and a system that, by its thermodynamic nature, seeks certain stable solutions. These solutions emerge from relations, not from design. When the elements of such complex systems cooperate, they give rise to behavior with a unitary character and thus to the illusion of structure. But the order is always executory, rather that rule-driven, allowing for the enormous sensitivity and flexibility of behavior to organize and regroup around task and context. (p. xix)

I think you can begin to see how this model of development corresponds to my own formulation of the nature of the archetype posited in my 2001 paper on the Baldwin effect:

Rather, the archetypes are the emergent properties of the dynamic developmental system of brain, environment and narrative. (p. 607)

If I were to rewrite this sentence today I would modify it somewhat, because I am no longer entirely happy with the word property, but I continue to stand by the basic proposition.

Ironically, for our discussion of EP, Thelen and Smith view their model of development as essentially evolutionary in nature, because, like evolution, it is opportunistic and sensitive to environmental variables, whereas nativist models argue, as they write, "for the logical necessity of innate ideas. They ask how the finely honed components of a mature mind could come about without the outcome being specified in detail in the organism at the start (p. 34)."

Now, in your comments, you seem to want to introduce the idea that someone in the emergence group is proposing mysterious or miraculous deus ex machina emergence. I confess, I am curious exactly who you have in mind. I certainly have never suggested that archetypes or any other emergent phenomenon just pops out of nowhere. Unfortunately, there are places in Jung where he seems to propose something miraculous. Just for the record, I am very skeptical about synchronicity as an actual phenomenon, which is why in my paper "The Self, The Symbolic, and Synchronicity" I suggest that what people call synchronicity is actually what I call an unusually dense symbolic structure that then gives the appearance of "popping out of nowhere." Synchronicity is, on this reading, an attribution mistake, just like saying the robots are cooperating with one another. To use your language, it is an extreme form of pattern recognition, or more accurately, pattern attribution.

From this point on you seem to be arguing that emergence is frequently characterized as miraculous. You distinguish between "strong emergence" and "weak emergence", but again I have no idea who you are referencing. Thelen and Smith certainly do not hold for any "miraculous" process. They simply argue that if you take a very simple machine—a baby—with certain evolved action patterns—the nursing pattern is unique to human infants—and put

it in an environment where the adult conspecifics inhabit an environment of complex narratives about infant behavior, you will end up with an adult human being. There are plenty of causal linkages here; the only startling proposition is that you do not need a complex innate plan to get the result. Now let me note for future reference, that the idea that there has to be a plan behind any phenomenon is an artifact of the Western metaphysical tradition back to Plato and Aristotle. This is why at the beginning of the seminar I remarked that my own background in Buddhist philosophy was an element in my own thinking about archetypes, because, to over simplify, Buddhism rests on the proposition that phenomena do not refer to substances or universals.

So let's talk about archetypes for a while. Needless to say, Jung is very hard to pin down on what exactly he is talking about. Jean Knox has presented the best overview of Jung's varied attempts to define what he is talking about. I think it is safe to say that Jung really had no idea what he really wanted to get to; he simply had the sense that there were significant regularities in human cognition and behavior that required some explanation. Mind you, Freud had the same impulse; it was and is part of trying to convince themselves and others that they were doing science. Science deals with regularities and universals, so if you are going to be a scientist you have to have regularities and universals. One of the problems with synchronicity is that no synchronistic event is repeatable.

Jung recognized that what he took to be archetypes did vary from culture to culture, and he was at pains to argue that the content of the archetypal image was culturally determined, but that the structure of the archetype nevertheless was universal. Thus Loki in Norse mythology and Coyote in Native American mythology are both manifestations of the Trickster Archetype, but they do have significant culturally determined differences. Jung's solution to the problem of regularity is to posit the existence of what he calls the Archetype in itself, which he distinguishes from the Archetypal image. The majority of the argument going on in Jungian circles about the nature of archetypes is really focused on the status of the archetype in itself. This is a point that I clearly should have made much earlier in this seminar, but late is better than never. For example, Jean Knox and I are in almost total agreement on the developmental elements of theory, but we divide on the question of the nature of the archetype in itself, which Jean argues can be viewed as an image schema—following the work of George Lakoff, among others. For Jean, the image schema is a developmental achievement that defines an elementary regularity that in turn defines certain cognitive and discursive regularities in human behavior. To my mind, if we are going to talk about some entity called the archetype in itself, the image schema does not fulfill the criteria Jung seems to want to attribute to that entity. I will leave the discussion Jean and I have going there. I can, however, also point out that the argument I had with Anthony Stevens was around his notion that the Archetype in itself is a genetic structure, in keeping with his position on socio-biology and evolutionary psychology. I suppose that from my point of view, both metaphysics and strong emergentism militate against the very notion of an archetype in itself. You do not need an archetype in itself to get archetypal images. So, heretically I suppose, I am arguing against one of Jung's foundational concepts. But such a position is also why a while back I stipulated my objection to "Jungian apologetics."

Now you state that, “For archetypal phenomena to be considered emergent, they would have to be novel in the system from which they emerged.” Quite frankly, I have no idea what this means. All of the developmental literature that proposes an emergence model deals with the emergence of regularities, not novel phenomena. Why do you think an emergent phenomena has to be novel, and more to the point, what do you mean by novel? The wetness of water or the behavior of a laser are considered emergent phenomena, and while they may be curious from an intuitive standpoint I do not believe they would fall into some category of novelty, at least as I understand the term. Again, you write:

The question to wrestle with is: “What makes archetypal phenomena patterned?” It is insufficient to answer this question with the one word “emergence”, because that is no different than invoking miracle or divine intervention.

Well yes, I suppose that if I or anyone else went around just invoking emergence you would be correct, but I do not believe that is the case. As I read your comments I am afraid that I find you making some very ill founded allegations regarding those of us who have been developing the emergence model. You need to offer some evidence before you go off accusing people of “invoking miracle or divine intervention” when no such invocation has been made. From what I can gather from your post, you would object if I said that the evolutionary psychologists simply invoke evolution whenever they see a regularity, and that to do so is no better than to invoke miraculous or divine intervention.

But I will give you a little anecdote to chew on. My principal teacher at Yale, the linguist and philosopher Rulon Wells, was a famous opponent of Chomsky’s generative grammar. I once asked him why precisely he was so opposed to Chomsky’s position. Wells was famous for being somewhat oracular, and his reply was in character. “If Chomsky is correct,” he replied, “his argument would constitute a proof for the existence of God.” Keep in mind while chewing on this, that Chomsky, unlike his epigone, Pinker, did not argue for an evolutionary origin of the language acquisition module.

Getting back to archetypes and archetypal images: there is a passage in Jung’s paper, “On the Nature of the Psyche,” that is something of a touchstone for me in thinking about archetypes. It is one of Jung’s characteristic animal analogies, and reads:

In view of the structure of the body, it would be astonishing if the psyche were the only biological phenomenon not to show clear traces of its evolutionary history, and it is altogether probably that these marks are closely connected with the instinctual base. Instinct and archaic mode meets in the biological conception of the ‘pattern of behaviour’. There are, in fact, no amorphous instincts, as every instinct bears in itself the pattern of its situation. Always it fulfils an image, and the image has fixed qualities. The instinct of the leaf-cutting ant fulfills the image of ant, tree, leaf, cutting, transport, and little ant-garden of fungi. If any one of these conditions is lacking, the instinct does not function, because it cannot exist without its total pattern, without its image . . . The same is also true of man: he has in him these a priori instinct-types which provide the occasion and pattern for his activities, in so far as he functions instinctively. As a biological being he has no choice but to act in a specifically human way, and fulfill his pattern of behavior . . . the [the primordial images] are not just

relics or vestiges of earlier modes of functioning; they are the ever-present and biologically necessary regulators of the instinctual sphere, whose range of actions covers the whole realm of the psyche and only loses its absoluteness when limited by the relative freedom of the will. We may say that the image represents the meaning of the instinct. (Jung, 1954)(para 398, Jung's emphasis)

This passage requires some careful unpacking. First of all, Jung gets this example from the work of Conway Lloyd Morgan, who along with Baldwin was working on variations to what, at the turn of the 20th century, constituted orthodox Darwinism. It is worth noting that one of Morgan's most important works, his Gifford Lectures of 1921 and 22, was titled Emergent Evolution. It is the case that Morgan argued that certain "novel" phenomena were emergent, phenomena such as life itself. Perhaps this is the order of phenomena that you are referencing when you suggest that emergent phenomena need to be novel, but some specificity would help. I suppose we could talk about first order emergence, such as life, and second order emergence, such as conversational turn taking, but that is not the issue here.

But regarding the image of the leaf-cutting ant, if we take this passage as something of a paradigmatic description of an archetypal image, we are faced with a situation that looks surprisingly like the complex dynamic systems model of behavior. The ant is by all accounts a very simple machine that is adapted to functioning in a specific environment. But all of the details of the environment are what add up to the totality of the behavioral pattern of the ant. In effect Jung is saying that you do not even have the ant if you do not have the entire image, which is the entire environment in which the ant is simply one part. Where Jung gets into a bit of understandable trouble, I would say, is in his appeal to instincts. Instinct is really not used all that often in modern biology although it is not rejected either. But any account of instinct is usually fairly simple. Jung was not clear on this, largely due to the state of scientific knowledge at the time. No fault there. But what most people would call instincts are really very basic behavioral patterns, often connected to simple physiological characteristics. So, the female cricket does not so much have an instinct to seek out a suitable mate, as she has a set of canals that differentially sense sounds and actuate a turning pattern that orients her to the direction of the loudest male song. Mate selection is the result of a sensor/actuator linkage. She does not have a template somewhat in her "mind" that makes a selection. By the same token, the human infant has an "instinctual nursing pattern" which, if it is imbedded in a human narrative environment leads to a complex human behavior. The "archetypal image" in both cases, like that of the leaf-cutting ant, is all you need to talk about something being archetypal.

Now, let me return to evolutionary psychology. First, a couple of points of clarification, because I do not like to be misrepresented: first of all, I have never invoked—that word again—Steven J. Gould in my objections to EP. Frankly, I do not find his approach to the question to be the most telling, but I also feel strongly that one should be careful how they characterize an eminent scientist, who was the leading authority in his field of snail morphology and evolution, and the theory of punctuated evolution remains, I believe, an important contribution. As regards Fodor, I would not invoke him too often, but as a philosopher I find the subtlety and force of his arguments to be telling and important, even

when I do not find them ultimately convincing. On top of that he is one of the most entertaining philosophical writers going. He's fun to read.

That said; let me clarify for the last time here a few other aspects of my position on EP. First, none of the advocates of emergent models reject the role of evolution in the system. The question is what has evolved. There is a rhetorical strategy that I have encountered in many EP advocates that goes like this—"my God, they reject evolutionary psychology that must mean they reject evolution, what fools." I exaggerate, but I am quite serious about this, and I find this trick to be intellectually offensive. There is no question that the burst-pause-burst nursing pattern is the result of evolution. It did not just pop into existence through divine intervention, and no one suggests otherwise. What is questioned is whether anything more in needed in the organism to get a developmental process going.

As I have previously noted I am not spending a lot of time keeping up with the most recent EP literature, although I have had the task of vetting a number of recent papers on the subject and I have found nothing that has indicated that the field has changed radically in the last few years. The main change that seems to have taken place is in the number of neuroscientists and other researchers who are consistently arguing that many of the elements traditionally associated with EP are at best questionable. What are these elements? If I were to outline EP it argues in favor of the following features, all of which are derived from evolutionary processes, which largely reflect environmental conditions in the Paleolithic era:

1) The mind/brain is made up of modules, and is in fact massively modular. In other words, each discrete cognitive feature of the organism enjoys a discrete modular component.

2) Each module is domain specific. This follows logically from 1 insofar as the hypothesis of massive modularity leads to ever more domain specific definition of the functioning of the modules

3) The operation of a domain specific module can best be characterized as the execution of an algorithm analogous to the function of an algorithm in a computer—this is the computational theory of mind that I have commented on before.

4) Maladaptive behaviors are the result of a mismatch between the evolution of the domain specific modules and their algorithms in the Paleolithic and the demands of modern society.

More can be said, but I would suggest that if contemporary advocates of EP stray too far from these propositions, they run the risk of falling out of the EP frame. There is an interesting question of when does one cross a threshold in a discipline and become something else. I am aware that Pinker, for example, has been working in a number of other areas, and may no longer put himself in the field of EP advocates. Similarly, there is a lot in Dennett that is important for emergence theory, such as his argument for the multiple drafts theory of mind. We can get into some of that another time. But my point here is that the critique of EP is not, so far as I am concerned, a matter of ideology, as it largely was in the early days of socio-biology, although when you get the likes of Newt Gingerich citing evolutionary psychology to buttress some of his right wing social ideas you do have to watch out for the illicit uses of EP.

Be that as it may, my point here is that I have systematic, and what I consider to be well founded scientific problems with all of the characteristics listed above. I am not alone in this, and it will be an ongoing argument. But if I have mischaracterized EP in some substantive manner, you will have to tell me precisely where I have erred. Again, I do not like to be mischaracterized myself, so please be specific. In the mean time, I recommend becoming at least as familiar with the arguments of researchers such as Ester Thelen and Linda Smith, if you are unsatisfied with the arguments of Knox, Hogenson, et al.

I had it in mind to say some things about psyche, and the work of Wolfgang Giegerich, but I find that at this point I am rather that I am running out of steam. I will be taking up Giegerich at a later time, but I would say for now that I find him to be one of the most fascinating and provocative voices in the Jungian world.

I must conclude. I want to thank all the participants for their questions and courtesy. I apologize for failing to respond to all of the questions and comments—the timing was probably not ideal for conducting this seminar, a circumstance I should have anticipated. Be that as it may, I hope that some benefit has accrued to the participants. I can say with certainty that it has been an important undertaking for me as I have to move on to finish my work on the Fay lectures, and the seminar has gone a long way to stimulating the level of discourse I want to attain.

Thank you for participating.

Best regards,

George

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From: **Warren Colman, 10.02.11 17:37:30**

Following on from George's final posting, I want to formally bring this seminar to an end and to thank George for the extraordinary generosity with which he has shared his time and ideas with the discussion list. The issues discussed are difficult and complex and the level of George's analytic thinking (in the generic sense) and deep knowledge of a range of sources

seems to me an exemplar to the best kind of scientific debate, whether or not one agrees with his conclusions. Given that the discussion list now seems to have moved on to another George, we might say that 'our George' has displayed a fluency that makes most of the rest of us look like stutterers. But then, in the King's Speech, the stutterer become the hero through his determination to give of his very best and his courage in overcoming his limitations as much as he possibly can. Another kind of inspiration.

With thanks too to all those who have contributed their often trenchant thoughts and questions,

Best wishes

Warren

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