Taking the Symbol concept out into the World and demonstrating Pre-conscious Psychology as the phenomena that underlies Modern science and complements scientific trends.

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Abstract

Wolfgang Pauli made the point that Jungian psychology became sectarian very early on in its development. Yet Jung says he only established some concepts that are useful for applying in life. Jung believed that identification is neurotic and that psychological freedom is essential as it is what he needed for himself. Jung said that psychology attracts neurotics like light to a moth. It is argued that discovery based on reading one's own mind can help those people. But for the thinker it is always the process leading up to the discovery that counts. So an example of how Jung's concept of the symbol can be applied to a phenomenon outside of Jungian psychology is expressed thus illuminating the symbol concept and taking it out into the world. The symbol is applied to Ray Kurzweil's theory of the technological Singularity and the link between inner pre-consciousness and scientific technological trends is discussed.

Keywords: Jungian, pre-conscious, Gieser, Kurzweil, symbol, exponential

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Introduction

When Carl Jung developed his concepts he did so in such a manner as to attain orientation for himself. He never considered what he was doing as forming a rigid dogma or religion. Identifying with Jung is well documented. The post-Jungian writer, Andrew Samuels, in an update of his 1980s classification of Post-Jungian schools said that "Jungian Fundamentalism" is a reality within Jungian psychology and it freezes and fossilizes Jungian thinking. (In Casement, 1998, p20 & 21). This neurotic tendency within some quarters of Jungian psychology could also be termed *'Jungianism'* and is clearly a psychological problem that is not confined to Jungian psychology as-such. However it is nevertheless more problematic due to the fact that neurotics are attracted to psychology and that definitely includes the numinoisty of Jung's ideas that tends to possess some of the psychologically weaker followers. When reading the next part of this paper bear this in mind… that the problem is being discussed partly to emphasise a general psychological problem and partly to shine a light on this psychological problem being particularly common within the Jungian community.

The heart of this paper focuses on pre-consciousness and exponential technological trends. A way of using Jung's concept of the symbol is discussed to demonstrate an example of how someone within Jungian Studies can *apply* the concept of the symbol. This *applying* approach illuminates the concept and should be viewed as a contribution to the psychology of the unconscious that originated in Jung's work. More precisely we are looking into pre-conscious processes linked to

technological evolution. (i.e., Kurzweil's the law of accelerating returns.) Thus the symbol concept is put to use as the inner psychological and pre-conscious side of the coin concerning the discovery of scientific facts.

Jungianism results in lack of psychological freedom

The Depth psychologist and researcher, Remo Roth quotes a 1956 letter from Wolfgang Pauli to Alfred Meier where the famous physicist remarked that the designation "Jungian psychology" is actually already unscientific sectarianism. I only acknowledge C. G. Jung's contribution to the general psychology of the unconscious." (in Roth, 2004). And Murray Stein demonstrates that it is not Jung who espoused dogma but rather some of his followers as Jung criticised "Freudians for a certain rigid, sectarian spirit of intolerance and fanaticism. I [Jung] proclaim no cut-and-dried doctrine and abhor "blind adherents." I leave everyone free to deal with the facts in his own way, since I also claim this freedom for myself." (in Bulkeley & Weldon, 2011, p65). Stein also notes the Catholic Theologian, Victor White's comment that "The horrible impression has come upon me in Zurich (I hope it is wrong) that my dear C. G. has around him only sycophants and flatterers: or people requiring audiences or transference which no mortal can carry. I *hope* I am wrong: such a situation is *too* inhuman." (in Bulkeley & Weldon, 2011, p65 & 66). Stein argues that Jung endured the Jungians "but did not allow them to trap him in his own "doctrines." (in Bulkeley, & Weldon, 2011, p66)

Of course Jung collaborated with those who were also innovative and whom were not at all possessed by him and his writings. Wolfgang Pauli is the shining example of genuine collaboration as opposed to possession. Pauli's anti dogma stance is clear. Karl von Meyenn quotes him as saying "I personally, have, besides, not much interest to fix the state of any science in some accidental point of time axiomatically, but merely to look in what direction a further development of this science is possible." (in Atmanspacher, H, & Primas, H, 2009). Pauli is aware here that it is the preconscious experience that is most healthy. There is nothing to be psychologically gained by marvelling over that which has been discovered already. This is a point that is implied later in this paper as we move away from Jungianism to the general psychology of the unconscious and the application of the symbol to another field of knowledge.

The scholarly historian of Jung, Sonu Shamdasani, points to a letter to Ernst Jones (dated 7 May 1913), where Jung writes "I am not in love with my ideas. I just consider them as working hypotheses and not as eternal truths." (in Shamdasani, 1998 p6). Shamdasani is another researcher who claims that it is Jungians, not Jung, who are the ones who are to blame for Jungian psychology being perceived as some kind of religion. He quotes Michael Fordham as saying that Jung "deplored" the "trend amongst some of his followers and his detractors [… that …] hinted that analytical psychology was a sort of religion." (Fordham in Shamdasani, 1998, p6) Many factors are at work concerning Jungians who treat Jungian psychology as a religion. Identification with Jung and with the images that

he selects in his collected works comes to mind here. Neurotic identification and hence loss of psychological freedom is the result. Jung's description of Friedrich Nietzsche's psyche is an example of a problem that some of his followers could have suffered from: Jung thinks that Nietzsche suffered from ego-inflation and that this condition is experienced by those with a weak mind-set. Lucy Huskinson says that this equates to "having an ego so weak that [it] is incapable of distinguishing what properly belongs to itself from what properly belongs to the objective transpersonal psyche." (Huskinson, L, 2004, p127). For neurotics the collective side of Jung's work is often the least important. Jung thought that was the case with Nietzsche. Huskinson quotes Jung as saying "It is far more necessary to strengthen and consolidate the ego than to understand and assimilate the products of the unconscious […] and this is possible only when a critical line of demarcation is drawn between the ego and the unconscious" (ibid). Pauli credited Jung for pointing out that "ascribing psychic contents to the ego [… can and do…] risk […] the inflation of consciousness." (in Gieser, S, 2005, p202). Jung/Pauli are emphasising the differentiation of ego consciousness from the other. Ego = I or the subject. Consciousness = differentiation (from the object).

While acknowledging the link between complex and archetype Roger Brooke nevertheless makes the point that it is personal complexes as opposed to collective unconscious archetypes that keep analysts busy. (Brooke, R, 1991, p17).

Clearly Jung found that his assertion in *Two Essays on Analytical Psychology* that neurotics are attracted to "psychology and psychiatry […] as a moth to the light"

(Jung, C, 1967, par. 192) certainly applied to many who were attracted to his own psychology.

In this part of the paper we have made passing reference to personal complexes. It is true that Jungians could point out that Jung referred to patterned typical complexes; for example in *The Symbolic Life* Jung refers to "inferiority complex, power complex, father complex, mother complex, anxiety complex…" (Jung, 1977, par. 1,257). But as far as practical life is concerned we are dealing here with categories that may help the therapist or analyst to understand the common problem being faced by the patient… it is still the psychology of everyday life and often that is all that the individual or patient needs to come to terms with.

Pre-consciousness and exponential technological scientific trends

Sonu Shamdasani says that Jung's ambition was for "psychology to be a superordinate science, the only discipline capable of encompassing the subjective factor held to underlie all the sciences." (Shamdasani, S, 2003, p30 & 31). This part of the paper is precisely about the unconscious as the underlying factor in scientific discovery.

There is much said in Jungian theory concerning pre-consciousness. The unconscious is often referred to as a problem in the sense that others need to be the conscious carrier for the lack of insight in the other. That lack of insight rightly implies pre-consciousness. Many of those who are unconscious in this way justify

their child-like identifications with excuses. Ironically (considering what we said in the previous part of this paper) Jungian psychology can educate here as we are not arguing that there is no place for consulting room depth psychology. However we do seek to go beyond the consulting room and out into the world.

Marie Louise Von Franz was arguably Jung's closest collaborator. She often wrote directly about pre-conscious processes. (Von Franz, 1974, 2001). She was particularly interested in alchemy (Von Franz, 1982, 1998) and creation myths. (Von Franz, 2001) Concerning alchemy she sought to clarify Jung's work, i.e., alchemy symbolizes the individuation process. She also understood that the projections of some of the alchemists were projected onto matter in early chemistry. (Von Franz, 1985, p73) That would equate to a mix of old pre-conscious thinking and discovery. The symbol would be dying but not quite dead. Meanwhile Von Franz argued that creation myths symbolize the birth of consciousness. However, we are not so much interested in these centuries long periods of pre-consciousness. Soon we will be discussing Kurzweil's work. His work emphasises the lessening periods of time spent in the pre-conscious discovery phase. Nevertheless it is worth noting that Von Franz bemoaned the fact that more research was not conducted concerning pre-conscious processes involved in the psychology of scientific discovery. (Von Franz, 1985, p75)

We will now look at examples of pre-consciousness by quoting from the Jung/Pauli researcher, Suzanne Gieser, and then the inventor and futurist, Ray Kurzweil. Gieser discusses pre-conscious processes using Jung's concept of the

symbol. Kurzweil refers to lucid dreaming. Gieser's lengthy discussion of the symbol can be considered a brief sketch of the entire preconscious process and Kurzweil's lucid dreaming can be considered late pre-consciousness, i.e., just before the discovery pops into conscious awareness.

In applying the symbol to the theory of the technological Singularity we first need to remind ourselves of the Jungian definition of the symbol. Suzanne Gieser writes that "The known part of the symbol is represented by its current form while the unknown part opens up the non-visual aspect of the archetype. The state of tension between known and unknown gives the symbol a numinous character, which lends it a power of attraction. Our fascination with and manipulation of the symbol gradually leads to a discovery of the true characteristics of the object and the symbol increasingly produces real knowledge. In this way the unknown is made conscious and thus the symbol loses its power of attraction and 'dies'. Jung's concept of the symbol actually describes a process which includes participation mystique, projection, awakening or revision of the contents of the projection, separation of the projection and the object, a new perspective on the symbol, alternatively - increased knowledge of the object, and exhaustion of the energy of the symbol by [one] hundred-per-cent transformation into knowledge, in other words the death of the symbol. Using this concept one might be able to describe the process of cognition from a new perspective. With it one can shed light on the underlying process of scientific discovery - a process which resembles the therapeutic process - if, like Jung, one sees the therapeutic process as a synthetic or

constructive one. A scientist who is wrestling with scientific riddles uses all his conscious capacity, in other words all the knowledge of the subject that he possesses, and then tries as hard as he can to see into the unknown. When the solution has been formulated it often arrives in a ready-made and finished form. The solution can seldom be reduced to the known elements with which one started, but would nevertheless be impossible if one had not started and worked with just those elements [...] When however the problem has been entirely worked through, the force ebbs out of the solution and it is either refuted or becomes an integrated part of a working theory. Finally it may 'die,' like an old religious symbol..." (Gieser, 2005, p269).

Gieser's definition of the symbol is classical Jungian. It's not identification. Gieser uses Jung's theories to advance as she puts it… "the underlying process of scientific discovery." (Gieser, 2005, p269). This isn't just repeating Jung's work. It is *applying* and *positioning it*. We noted earlier how identification with Jung can be a problem. So this is about the psychology of the unconscious, or more specifically the pre-conscious. The pre-conscious underlies scientific discovery hence this is also connected to science. One scientist who is very innovative is the inventor, futurist and figure most closely associated with the technological singularity hypothesis, Ray Kurzweil. He seeks to radically lessen the time that we spend in pre-conciousness through cognitive enhancement. However, until that time arrives he uses the unconscious in order to come up with innovative ideas and solutions to

problems. He knows how to use pre-consciousness to work on symbols within his own field.

Kurzweil credits the preconscious with many of his inventions. He is able to deliberately use the borderland state of mind (in-between conscious and unconscious) to do creative thinking. Kurzweil applies depth psychological insights and puts them to use. He explains "When I go to sleep I assign myself a problem. […] It might be some mathematical problem or some practical issue for an invention or even a business strategy question or an interpersonal problem. But I'll assign myself some problem where there's a solution, and I try not to solve it before I go to sleep but just try to think about what do I know about this? What characteristics would a solution have? And then I go to sleep. Doing this primes my subconscious to think about it. Sigmund Freud said accurately that when we dream, some of the censors in our brain are relaxed, so that you might dream about things that are socially taboo or sexually taboo, because the various censors in our brain that say "You can't think that thought!" are relaxed. So we think about weird things that we wouldn't allow ourselves to think about during the day.

There are also professional blinders that prevent people from thinking creatively. Mental blocks such as "You can't solve a signal processing problem that way" or "Linguistics is not supposed to be done this way." Those assumptions are also relaxed in your dream state, and so you'll think about new ways of solving

problems without being burdened by constraints like that. Another thing that's not working when you're dreaming is your rational faculties to evaluate whether an idea is reasonable, and that's why fantastic things will happen in the dream, and the most amazing thing of all is that you don't think these fantastic things are amazing. So, let's say, an elephant walks through the wall, you don't say, "My God, how did an elephant walk through the wall?" You just say, "OK, an elephant walked through wall, no big deal." So your rational faculties are also not working.

The next step is in the morning, in this half-way state between dreaming and being awake, what I call lucid dreaming; I still have access to the dream thoughts. But now I'm sufficiently conscious to also have my rational faculties. And I can evaluate these ideas, these new creative ideas that came to me during the night, and actually see which ones make sense. After 15 to 20 minutes, generally, if I stay in that state, I can have keen new insights into whatever the problem was that I assigned myself. And I've come up with many inventions this way. I've come up with solutions to problems. If I have a key decision to make, I'll always go through this process. And I'll then have a real confidence in the decision, as opposed to just trying to guess at the answer. So this is the mental technique I use to try to combine creative thinking with rational thinking. (Kurzweil, 2006) Kurzweil thus applies Depth Psychological thinking in order to make discoveries. And while Gieser outlines theory of pre-consciousness that concerns all phases of pre-consciousness, Kurzweil's example is to do with late pre-consciousness, just before the discovery or answer bursts into conscious awareness. All kinds of activity must

be going on in the mind of the late pre-conscious innovator. We would expect that it would amount to more than just Freudian repression though. We would expect that many disconnected associations that have not been forcibly repressed are connected in this late stage until from seemingly out of nowhere the *eureka* moment is experienced.

Gieser's description is very helpful. She includes participation mystique as one of the factors involved in the life of the symbol. From the thinkers perspective this would be a lapse, regression, stagnation. Certainly much of the pre-conscious phase equates to being stuck. Hence that is consistent with a potential lapse into participation mystique. So here the thinker will want to get their mind moving again. Many individual thinkers will have their own method for getting their mind moving when it is stuck. MIT's Marvin Minsky says that the "big feature of human-level intelligence is not what it does when it works but what it does when it's stuck." (in Kurzweil, 2005, p189). Minsky would certainly agree with Gieser that new perspectives on the symbol must be modeled because he writes "If you understand something in only one way, then you don't really understand it at all. This is because, if something goes wrong, you get stuck with a thought that just sits in your mind with nowhere to go. The secret of what anything means to us depends on how we've connected it to all the other things we know. This is why, when someone learns "by rote", we say that they don't really understand. However, if you have several different representations then, when one approach fails you try another. Of course, making too many indiscriminate connections will

turn a mind to mush. But well-connected representations let you turn ideas around in your mind, to envision things from many perspectives until you find one that works for you. And that's what we mean by thinking!" (in Kurzweil, 2005, p289).

At the collective level of technological innovation the length of time that ideas remain in the pre-conscious phase is becoming less and less. Two examples of this fact will be noted here: Firstly in 1992 the chess champion Gary Kasparov lamented computer chess as pathetic. Hence 1995 and 1996 must have seen exponential growth in computer chess as Kasparov was famously beaten by a computer (Deep Blue) in 1997. (Kurzweil, 2005, p8) And in early 2011 IBM's Watson AI competed and won on the U.S. game-show *Jeopardy*. Work on Watson only started in 2006 after David Ferrucci completed a feasibility study that convinced him that the necessary technology for Watson was possible. Yet he still encountered many nay-sayers who thought it was going to fail (in Ferrucci & Waters, 2011). While interviewing Ferrucci, Richard Waters said that he knows people who in 2006 thought that it would take 20 or 30 years for Watson-like technology to emerge. (in Ferrucci & Waters, 2011). However Ferrucci says the project was completed in just 4 years. (in Ferrucci & Waters, 2011).

When we refer to pre-consciousness it is the inner processes within the mind (or psyche) that is being discussed. Kurzweil also discusses the outer expression of it through a theory of technological evolution. This is the external world side of the coin that we can see with our eyes, as opposed to the inner pre-conscious side.

Kurzweil focuses on the process of science fiction to science fact. However his primary concern (as a futurist) is on the process of today's and tomorrow's technologies. So for example biotechnology and nanotechnology are not science fiction even if they are in the early stages of maturity. Kurzweil's focus on exponential technological trends is labelled by him as "the law of accelerating returns." (Kurzweil, 2005, p7). And the most interesting part of his theory is on the exponential stage of development of technology as this is when progress is made at a rapid pace. He often cites the human genome project which made great leaps in the final two years of the 15 year project. (Kurzweil, 2005, p13, p73, p145). This late stage of development is both the most exhilarating and close to the most disappointing as it is not long before the psychological death of the symbol is experienced. Kurzweil has experienced the death of the symbol. In the context of discussing artificial intelligence (AI). Kurzweil writes "Rodney Brooks, director of the MIT AI Lab [says] Every time we figure out a piece of it, it stops being magical..." (Kurzweil, 2005, p265). Kurzweil then directly quotes Brooks... "...we say, Oh that's just a computation." (in Kurzweil, p265) Kurzweil says that this brings to mind something that Sherlock Homes says to Watson: "I thought at first that you had done something clever, but I see that there was nothing in it after all." (Kurzweil, 2005, p265). Clearly the symbol sometimes becomes a sign for AI researchers as Kurzweil bemoans the fact that Watson's comment "has been our experience as AI scientists. The enchantment of intelligence seems to be reduced to "nothing" when we fully understand its methods. The mystery that is left is the

intrigue inspired by the remaining, not yet understood methods of intelligence." (Kurzweil, 2005, p265 & 266). Symbols that are *thought through* lose the ability to transform psychic energy. The living symbol thus becomes a dead sign. Gieser explains that "A symbol consists […] of a rational part which has to reveal or explain reality, but also of *numinosum* – in other words an irrational part which conveys a feeling of respect, meaning a conviction. The ultimate cause of a death of a symbol is that it is 'exhausted', in other words so thoroughly worked out, so insipid, that nothing new seems to emerge from it." (Gieser, 2005, p192). That is why the AI field return fast to thinking about the not yet understood problems within their own field.

Conclusion

In this paper we started by discussing neurotic mistakes. Many people can see how the neurotic could attain relief by correcting what are often (viewed from the outside) easy to spot mistakes. Hence in psychological neurosis it is actually the discovery into oneself that is the key. Then we discussed more free-thinking psychology in relation to Kurzweils technological singularity. The thinker within a field of knowledge wants to *think*, as opposed to staring at the previous results of his or her work. This applies to many within Jungian psychology and to all genuine thinkers within technological science. Hence in underlying science (i.e., psychology) once the discovery is made then the thinker wants to straight away

focus on what we still don't know and work on that. i.e., the "remaining" (Kurzweil, 2005, p266) It is precisely this pre-consciousness that Wolfgang Pauli was interested in. Pauli is an example of someone who was not interested in freezing and marvelling at Jung's work. Atmanspacher and Primas remind us that Pauli considered progress towards understanding as difficult. They quote Pauli as saying that it "is a laborious process, guided by unconscious elements long before their result can be formulated in rational terms." (in Atmanspacher, H, & Primas, 2006). We noted how Kurzweil deliberately and successfully uses the late stage of this laborious psychological process to make discoveries.

Jungian psychology can make a contribution to the psychology of the unconscious and should support scientific discovery rather than oppose science.

Notes on Contributor

Paul Budding is a freelance researcher within the field of Depth Psychology and former member of the IAJS.

References

Atmanspacher, H, & Primas, H. (2006) Pauli's ideas on mind and matter in the context of contemporary science. *Journal of Consciousness Studies, 13*(3), 5-50.

Atmanspacher, H, & Primas, H. (2009) *Recasting reality: Wolfgang Pauli's philosophical ideas and contemporary science.* (Springer-Verlag Berlin Heidelberg)

Brooke, R. (1991) *Jung and phenomenology.* (Routledge)

Bulkely, K, & Weldon, C. (2011) *Teaching Jung.* (Oxford University Press)

Casement, A. (1998) *Post-jungians today: key papers in contemporary analytical psychology.* (Routledge)

Ferrucci, D, & Waters, R. (2011) The future comes faster than you think. A computer called Watson. Exponential Times. http://exponentialtimes.net/videos/computer-called-Watson

Gieser, S. (2005) *The innermost kernel: depth psychology and quantum physics. Wolfgang Pauli's dialogue with C. G. Jung.* (Springer-Verlag Heidelberg)

Huskinson, L. (2004) *Nietzsche and Jung: The whole self in the union of opposites.* (Brunner-Routledge)

Jung, C, G. (1917/1926/1943) On the psychology of the unconscious: general remarks on the therapeutic approach to the unconscious. In *Collected Works, col. 7, Two essays on analytical psychology.* 1967. (Routledge & Kegan Paul Ltd)

Jung, C. G. (1959) Foreword to Jacobi: complex/archetype/symbol. In *Collected Works, vol. 18, The symbolic life.* 1977. (Routledge & Kegan Paul Ltd)

Kurzweil, R. (2005) *The singularity is near: when humans transcend biology.* (Penguin Books)

Kurzweil, R. (2006) Ubiquity interviews Ray Kurzweil. ACM Ubiquity. http://ubiquity.acm.org/article.cfm?id=1117663

Roth, R. (2004) Letter to Alfred Meier, president of the C. G. Jung institute, Zurich, 1956. http://paulijungunusmundus.eu/pauli_quotations_published.htm

Shamdasani, S. (2003) *Jung and the making of modern psychology: the dream of a science.* (Cambridge University Press)

Von Franz, M. L. (1974) *Number and Time: Reflections leading towards a unification of depth psychology and physics* (Northwestern University Press)

Von Franz, M. L. (1982) *Alchemy: an Introduction to the Symbolism and the Psychology* (Inner City Books)

Von Franz, M. L. (1985) *Projection and re-collection in Jungian psychology: reflections of the soul.* (Open Court Publishing Company)

Von Franz, M. L. (1998) *Alchemical active imagination* (Shambhala Publications Inc; New edition edition)

Von Franz, M.L. (2001) *Creation myths* (Shambhala Publications Inc; Revised edition)

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