

## Using Zubiri to Re-think Carl Jung on “Emotional Reality”

Theo Cope

*South China Normal University  
Guangzhou, China*

### Abstract

The science of emotion is a multidisciplinary field of study. Researchers set out upon particular lines of inquiry into the foundation of emotional reality—physiological, biological, neurological, and psychological. The last domain, however, has one contributor who has been largely marginalized and yet provides us with significant insight into the psychic reality of emotions. This contributor was Carl Gustav Jung. This article seeks to apply Zubiri’s philosophy of noergics to re-think Jung’s “complex doctrine” theory. Jung avoided the current neurological sciences and philosophies and adhered to Kantian thought, leading to certain difficulties. Zubiri’s insightful analysis of sentient intellection provides a new philosophic interpretation to emotional reality and a sound base for the viability of a modified “complex doctrine.”

### Resumen

La ciencia de emoción es un campo multidisciplinario de estudio. Investigadores siguen líneas particulares de pregunta en la fundación de la realidad emocional—fisiológico, biológico, neurológico, y psicológico. El último, sin embargo, tiene un contribuyente que ha sido marginado grandemente pero nos proporciona una visión signficante en la realidad psíquica de las emociones. Este contribuyente era Carl Gustav Jung. Este artículo busca aplicar la filosofía de Zubiri de noergia para re-pensar la teoría “doctrina compleja” de Jung. Jung evitó las ciencias neurológicas y filosofías, sino adhirió al pensamiento Kantiano, llevando a ciertas dificultades. El análisis profundo de Zubiri de inteligencia sentiente abre una nueva interpretación filosófica a la realidad emocional y forma una base viable de una “doctrina compleja” modificada.

### Introduction

In this article, I apply Zubiri’s noergic philosophy of sentient intellection <sup>1</sup> to the field of psychology, and more particularly, the psychology of emotional imagery. <sup>2</sup> With the advent of brain imaging devices, scientists have made amazing progress in understanding the myriad parts of the brain which function when humans experience various emotions. Concurrently, with the new technologies in the biological and biochemical sciences, models have been created which provide insights into biochemical processes that co-occur when an emotion is experienced. Myriad brain

nuclei are active in both experiences and modes of functioning. Affective science considers *functionality* and assumes it to be causality. In true positivist fashion, it examines the functioning of brain nuclei and in a reductive manner asserts that these functional brain regions *are the emotion*. Based upon the neuron doctrine, a view that states it is the neurons of the brain that create the mind, this neural monism, as it is called, has many adherents and few voices loud enough warranting caution. <sup>3</sup> Biochemical theories explain the emotion as the experience of biochemical transformations. These approaches to emotions are from the “outside in” in that

they look at the physical components of human emotional experience. They examine the physical and functional responses of the brain and body to stimuli, but do not and cannot capture the fullness of human emotional experience.

Cognitive psychology, especially the current applications of cognitive neuroscience and neuroimaging, consider the emotion by discussing the mental schemata activated by the emotion. It also considers the emotional image. One eminent and pioneering researcher, Peter J. Lang, considers the *physiology* of an emotional image.<sup>4</sup> Lang's theory draws on psychophysiology, cognitive psychology, and behavior therapy. His proposal is that the structure of an emotional image consists of a motor program as well as an expressive behavior. The "image networks" contain encoded information about sense organs, physical orientation, posture, as well as psychological factors. Can we seriously think that an emotional *image* has a physiology? Clearly, he is considering the physiology of the body more than the image. Again, this is a view of human emotional reality from the "outside in."

On the other hand, there is an alternative doctrine that has been espoused almost 100 years ago, and an alternative way of explaining the emotional image, though ignored by most researchers into emotional reality. This doctrine was propounded by the Swiss psychologist, Carl G. Jung (1875-1961) and is called the "complex doctrine." It was proposed during the same time period that Camillo Golgi (1843-1926) proposed a reticularist theory of brain functioning, thinking that the neurons form an interlinked network, and Santiago Ramón y Cajal (1852-1934) proposed what is called the neuron doctrine. The neuron doctrine won the day. Though the psychological "complex" has a history that predates Jung's application, he used this idea to create a theory of emotional experience. Jung proposed a theory of affective reality that is psychological *qua* human psyche. It is based upon the reality of the human psyche and the psyche's

propensity to create images and is, in this sense, a view from the "inside out." Moreover, Jung defined a complex by affirming that, "It is the *image* of a certain psychic situation which is strongly accentuated emotionally and is, moreover, incompatible with the habitual attitude of consciousness."<sup>5</sup> Jung focused on the human experience of the emotion and the image it creates in and apprehended by the human psyche. While he realized the importance of the brain in this process, he never developed this line of inquiry.

These three different methods of inquiring into the in-depth reality of an emotion and emotional image have their strong and weak points. The first two provide an analysis of the neurological and physiological reactions to an emotion; though they totally ignore the psychic dimension. Jung, on the other hand, considered the physiological and psychic, but totally ignored the neurological. Merely combining these is insufficient. Exposing their fundamental unity is helpful, but still inadequate. The human experience of an emotion has material (biochemical, hormonal, neurological, physiological, and social) and psychological dimensions that are co-actualized in our apprehension. It is more accurate to speak of a socio-psychophysical emotion, and emotional imagery, though in order to do so we must re-think Jung's interpretation and reconsider the data used by reductive empirical scientists. Only by doing this, I submit, will we be able to make progress in comprehending emotional reality and create a "complex neuron doctrine" or perhaps linguistically better, a "neurocomplex doctrine" of human affective experience.<sup>6</sup> In order to achieve this goal, I shall apply Zubiri's noergic philosophy.

### I. Sentient Intelligence and Psychology

In Zubiri's final completed work, *Sentient Intelligence*, he informs us in the preface this entire work is the explication of one idea. This idea, this thesis, is that "human intellection is formally the mere

actualization of the real in sentient intelligence.”<sup>7</sup> Having erected his philosophy of intelligence upon the *actuality of reality in apprehension*, allows Zubiri to present a cogent and challenging philosophical system which not only presents us with a new view of sensation and intelligence, but also of reality. The third part of this work, *Intelligence and Reason*, is Zubiri’s contribution to our understanding of reason *qua* intellectual progress to know in-depth reality. “In-depth reality,” or what something is “in reality itself,” is a quest, an intellectual search undertaken to better comprehend the reality “beyond” what we apprehend in our sentient intelligence and in the field of reality. We go searching towards this beyond based upon what has previously been apprehended as real. We are impelled by the reality we apprehend to go searching for what it is in-depth. In our search, we are retained in this reality intellectually known, in order to be able to return to this reality apprehended, a reality from which we have never left, with a better comprehension of what it is. The reality is actualized in our intellection and we search to determine if what we think it could be is or is not what it is in itself. This progression is not a process, he tells us, but a “structural moment of intellectual knowing.”<sup>8</sup> While there are many different paths, or methods, to intellectually know in-depth reality, I shall be focusing on only a few: psychological, scientific and emotional.<sup>9</sup>

We set out in search of what something could be, based upon what we have intellectually known before as real. This reality we want to comprehend better has imposed itself upon us in our first intellectual act: primordial apprehension of reality. This is *sentient intellection*. We are affected by this *other*, this reality that is “in its own right” (*de suyo*) what it is. This primary apprehended reality is modalized and becomes something “in reality” when we declare what it might be. This is *sentient logos*. The reality we have apprehended sentiently is known respective to other realities we also have known. We

only know fear or sorrow because we know peace or pleasure; we know joy because we know grief. Before we know either the feeling of fear or pleasure, we have apprehended and been affected by something which has been imposed upon us by reality. When we intellectually inquire into what this reality is that we call fear or anxiety, we do so by affirming its reality and creating a method or methods for our search, that is “a way of access from one actualization of the real to another.”<sup>10</sup> This is *sentient reason*. Inasmuch as it is reality that imposes upon us, Zubiri informs us that reality is *affectant*; “sorrow and pleasure are the primary expression of that affection.”<sup>11</sup>

It is imperative, he says, that in our questing for in-depth reality, we understand any reality “as a function of other real things”<sup>12</sup> by utilizing a system of reference which serves as a direction toward what this reality we want to know in-depth could be. This direction is established based upon what we have previously known as real and what we have declared it to be in reality. The system of reference is not just primordial reality, nor just what we have declared it to be, but also the concepts, percepts and perhaps creations [fictions] of other intellectual fields of knowledge we know: scientific, poetic, emotional, personal, etc.; that is, other methods used to inquire about reality in-depth. These concepts, percepts and fictions are what Zubiri calls “simple apprehensions,” and what something is “in reality” *qua* actualized in our intellection becomes realized (made real) in the real thing.<sup>13</sup> What has often happened is that when we go searching for the in-depth reality of what something could be, we use a system of reference that is not appropriate for the mode of reality into which we are inquiring. For example, when inquiring into the in-depth ground of emotional reality, instead of using an emotional or psychological measure, many use a neurological or biochemical one. Fear or sorrow is explained by using a canon and a principle that is not applicable for the human

intellective and psychological *experience* of this emotional reality *qua* psychic.

Fear and stress are indeed real and the force with which these impose themselves upon us most certainly gives us pause to think.<sup>14</sup> In many lower forms of life, animals in particular, fear causes them to freeze. In humans, it has been assumed that this emotional reality we call stress puts us in a state of readiness and induces a “flight or fight” syndrome, though the most recent scientific findings indicate that this is true for the male but inaccurate for females.<sup>15</sup> The human female response is to come together and seek support. Moreover, it has been assumed that an animal model and animal neurological, biochemical, and neurochemical processes are appropriate canons and measures by which to judge human affective response. Thus, modern researchers use brain imaging devices (*MRI*, *fMRI*, *SPECT*) to observe the brain’s responses to fearful or stress-inducing pictures, conclude that particular brain nuclei are causing fear, and particular neurochemicals are being released. This fear is the response to what is apprehended, and even if the stimulus is not consciously seen, the brain nuclei still respond.<sup>16</sup> Scientists cannot determine for sure if the findings on animal models are fully applicable to humans, but it is commonly assumed to be so since animal neuroarchitecture and neurochemical systems are similar. What these experiments inform us is that the amygdala responds to fear, even if the subject does not feel afraid. The activation of brain nuclei is not the same as emotional expression or experience, but is a functional property of these experiences.

I mention this example because it reveals most clearly a serious challenge for any human science of affectivity. The intellectual quest for what human emotional reality could be has been undertaken based upon a measure of animals. Furthermore, it has been undertaken based upon *animal* behavior and neurobiochemical processes. Affective sciences

have taken a mode of reality, a mode that is *apersonal*, and applied it to a unique mode of *personal* reality. It has also considered the neuron doctrine which is a doctrine about a physio-electrochemical level of reality and applied it to human emotional experience, thus affirming that what an emotion is is the functioning of a neural network—a group of neurons that function together. In a more in-depth physicalist and biochemical explanation, I can know that when I am remembering the loss of my loved one there are myriad brain nuclei activated, and cascades of corticotrophin releasing factor (CRF) causing panic, and various hormones coursing through my body. It does not help explain fully the human emotional reality, however, no matter how specific the level of detailed knowledge might be. Moreover, human reality cannot be reduced to either the animal or the neurochemical or hormonal level, though it must include these.

Also, what has become apparent recently with the pioneering work of women scientists is that a standard and canon derived from male may not be accurate or fully applicable to females. The unique differences of gender have been glossed over by the simple apprehension “MAN” for another simple apprehension “WOMAN”. We apprehend two different modes of reality and subsume them under one measure which then becomes the principle for both. Female reality differs from male reality.

When we consider Zubiri’s contribution, he is most emphatic and most accurate when we he explicitly reminds his readers that each type or mode of reality must have its own measure, that is its own canons and principles, and even its own method of search. Thus, by using animals as the measure for human experience is not only limiting, but also potentially false.<sup>17</sup> Attempting to understand human emotional experience by examining brain nuclei and using this as a canon provides an insufficient explanation. *Qua* human, male and female are similar, and of this, there is no doubt. *Qua* female reality and *qua* male reality, these two modes

of human reality reveal significant differences that eventually must be accounted for in any in-depth explanations offered by scientific endeavors. Scientific explanations are just beginning to give pause and think about this problem encountered in reality.

## II. The sciences of representation

The cognitive and neurocognitive approaches to emotional imagery are premised upon one assumption: the *representation* of emotional imagery in the brain, and for the consciousness. In Hillman's early work on emotions, he indicates that in the theories he examined there were three manners of connecting emotion and representation. The first is that the emotion *consists of* representations; second, emotions arise from representations; thirdly, representations arise from emotions.<sup>18</sup> In 1958, Pradines asserted that sentiments and emotions come from imagination and mental images,<sup>19</sup> and currently, Damasio suggests that particular images of core consciousness are "those of a feeling."<sup>20</sup>

Inasmuch as the neurological and cognitive approaches focus their interpretative schemes upon representations, this is insufficient. The insufficiency lies in a fundamental assumption: *representation by neurons and neuronal clusters*. This is, of course, a postulate necessary within the system of reference which uses the neuron doctrine as its ground. However, what is represented is, in fact, re-presented. This is a fundamental contribution of Zubiri's noergics. The reality of the psyche, like the reality of the brain, is not merely a representational system. It is a system that presents us with realities to apprehend, and that enables us to apprehend realities that are presented to us. Heeding the words of Barsalou in this context is eminently prudent, "One of the thorniest issues in cognitive psychology is the nature and role of representation. Because psychologists view representation in many different ways..."<sup>21</sup>

Cognitive psychologists discuss representations thus: whatever we apprehend with our senses, or our subjective experience, is *categorized* by our cognitive schemas. Categorization has been described as a sort of gateway between cognition and sense perceptions. Once a sensory system gathers information about something external, cognitive systems place this "entity" into appropriate mental categories. There are discussions about visual and auditory entities, for example, that must be represented and categorized by the brain:

These categories are representations, because they are structures in the cognitive system that stand for perceived entities in the environment...the actual form of a representation in the brain need not look anything like its referent or linguistic label. For example, the brain represents *chair* with brain states defined over large populations of neurons, not with brain entities that literally look like a physical chair or the linguistic label "chair." Nevertheless, these brain states are representations in the sense that they stand for their referents in the environment and can be manipulated by cognitive mechanisms that reason about the environment.<sup>22</sup>

Theories of mental representation are not new, and have a long history in ancient and medieval philosophy and views of psychology.<sup>23</sup> What is new is that the terms used currently do not derive from psychology, but from many fields dealing with mathematical computations and computers. Moreover, there is no agreement on what representations are, how they are constructed, their function, their relationship to the "real world" (since they are subjective and neurological), or their purpose. There are many models, such as associative networks, connectionist networks, episodes, cases, production rules, propositions, schemas, and mental models. "Indeed, the very conception of mental representations was introduced as an essential component of perceptual theory in

order to explain how such object constancy can hold, despite changes in the sensory information impinging on the receptor surface”<sup>24</sup> Churchland expresses succinctly that earlier models of representations took them to be symbols, but “in parallel models it is a pattern of activity distributed across a network.”<sup>25</sup> This network model is what we discern in the above citation from Barsalou.

In the field of emotion studies, Macleod & Mathews provide a representative explanation from the cognitive approach:

Depending on how one thinks emotional information is represented in memory, emotional states could activate all congruent representations; that is, those consistent in valence and meaning with that emotion. Alternatively, only some kinds of congruent information might be activated, such as that involved in causing the emotion or relating to the individual's current concerns.<sup>26</sup>

In most instances of emotional imagery, the image that is evoked and apprehended derives from personal memory. The image, while memorial, need not be exactly of the memorial event or happening, but sufficiently enough so, so as to be able to connect present emotion with past events.

One facet of emotion is that of appraisal. Arnold placed appraisal firmly within the cognitive approach and “suggests that we immediately, automatically, and almost involuntarily evaluate, with respect to ourselves, anything that we encounter.”<sup>27</sup> Appraisal of a memory image, as an automatic process, may be consciously re-evaluated, though emotional responses frequently interfere with valid appraising of current experiences. If the memory is of a traumatic nature, the “image network,” interferes with our appraisal in that it evokes and elicits intricate physiological and psychological reactions that have become canalized and habitual. The final connective link of any appraisal process according to Arnold is imagina-

tion. Most cognitive theorists utilize the appraisal construct and many assert that it is non-conscious. Recall that this appraisal process is taken to be an automatic process, and now assumed to be done by the amygdala or hippocampus, both brain nuclei.

The evocation of an image brings us to another important element that must be considered from the cognitive approach: the process termed *ecphory*. Richard Semon coined the term *ecphory* in 1904 to refer to the activation of a latent engram into an active state of conscious information. Also coined by Semon as the complementary term, an *engram* referred to the permanent change brought about by stimulation of an organism.<sup>28</sup> It has also been often referred to as a “memory trace.” The process was passive in that the stimuli affected the organism and thus changed it. These engrams could be reactivated by stimuli weaker than the initial one. Images that have “physiologies” are easily evoked by a lesser emotional intensity than that which was needed for their acquisition. Many of these engrams will lie latent in the memory systems, but some will not. In order for the engram to ecphorate, that is, to be activated, it needs to be cued. Tulving asserted that some cue just “happens to come along.”<sup>29</sup>

Tulving adopted Semon's term though he utilized it differently from within a cognitive approach to episodic memory. For Tulving, ecphory “refers to the conversion of information from two sources, the engram and the retrieval cue, into another form, ecphoric information.”<sup>30</sup> The difference is subtle but important. While Semon took ecphory to be the activation of a latent engram, Tulving added the component of retrieval cues. Retrieval is merely the utilization of stored knowledge, and Tulving knew that retrieval was a vague term within the field of memory science, implying many things to different people. To differentiate it, he added the component of retrieval cue, which he defined as “the present description of a past description.”<sup>31</sup> Whether or not retrieval of a

memory trace (an engram) was spontaneous, stimulated, or cued, Tulving held that we should always consider it as being cued. He also asserted unequivocally that engrams may not exist in exactly the way we theorize about them, but they "certainly exist in the sense that they are responsible for observable effects that could not occur in their absence."<sup>32</sup>

That engrams "certainly exist," indicates the nature of this postulated construct in the minds of cognitive scientists. Tulving also avers his partiality to these engrams being bundled; the engram has a collection of features that are evoked during the ecphory process. There is a problem with the notion of these features, he asserts, and that is the lack of a notion of what holds these bundles together. In the case of emotional complexes, it may be that the intensity of the event and the memory created by this event serve as the binding force. The construct of the engram remains a working hypothesis in this reductive approach and is still utilized in the scientific literature.

It was with the work of Karl Lashley that the engram became popularized, though current works are refocusing attention to Semon. After many decades of striving to find the *place* of the engram, Lashley failed to find the neurological location, though he never gave up searching. He wrote, "In experiments extending over the past 30 years I have been trying to trace conditioned reflex paths through the brain or to find the locus of specific memory traces. The results for different types of learning have been inconsistent and often mutually contradictory, in spite of confirmation by repeated tests."<sup>33</sup> He later asserts that "The engram of a new association, far from consisting of a single bond or neuron connexion, is probably a reorganization of a vast system of associations involving the interrelations of hundreds of thousands or millions of neurons."<sup>34</sup> For Semon and Tulving the changes that create engrams are unknown, and though modern scientists discuss memory in terms of long-term potentiation (LTP), the

observational evidence for this as a process is not firm, yet it is still a construct widely adopted.<sup>35</sup> Lashley sought to make this unknown known but could not do so and though he persisted, he admitted that his experiments "discovered nothing of the real nature of the engram."<sup>36</sup> He abandoned the engram search and later came to favor a "field theory" of learning, which has resonance with Gestalt theories.

Though Lashley failed, cognitive scientists still adhere to the goal of finding such a location; it is oftentimes through persistence and failure that science moves forward. In the science of the neurobiology of memory, Dudai presents a cogent history of the elusive anatomical foundations of the engram, asserting that it has been found in mollusks. In his work, Dudai interchanges the terms engram with memory trace, and in the mollusks indicates that the search was on "cellular and molecular processes, rather than on the topography of the trace."<sup>37</sup>

It is insightful that such failure in other species did not discredit the concept of ecphory nor of the postulated reality of the engram; this is proven by the fact that it is still utilized in scientific discourse. This is not a mere failure in scientific research, but points to a more serious and fundamental discrepancy in such an approach to psychological reality. As stated earlier, psychology has often forgotten to consider seriously psychological reality as a genuine *form* of reality *qua* psyche, and has instead sloughed it off as subjective epiphenomenalism without attempting to explain it rationally.

What is helpful in considering Semon's and Tulving's concepts is Tulving's distinction between the structural property and functional property of engrams:

Structural properties of memory traces imply their conceptualization as entities that can at least be imagined to exist independently of their function; functional properties, on the other hand, can be identified and described without postulating any such

independent existence.<sup>38</sup>

Semon never made such a distinction between functional and structural properties and it is significant to do so. For Tulving, the focus in psychology should not be on what engrams *are*, but rather what they *do*. The difference is clear: of themselves, memory traces do nothing, but are activated by some cues and in combination with different processes, all taking place in an environment conducive to their retrieval. They are in these senses dispositions to act that need to be cued.

Whether these engrams are conceived to be stored information, some record of a past operation, dispositions, pictures or images, propositions, analogical relations, or networks, matters little. We have no firm manner of speaking about a memory trace, and perhaps this is as it should be; different individuals view the same functional phenomena from differing aspects.<sup>39</sup> Perhaps this theory is on the wrong track.

Cognitive neuroscience (CN) considers that different brain regions are implicated in the retrieval of memories, though there is no specific location where memories are stored and many parts of the neurological system participate in representing any event. Implicit in the CN view is an acceptance that “each perceptual or motor act has an *internal representation* in the brain: a representation of information in patterns of neural activity.”<sup>40</sup> Milner’s review of the CN approaches to understanding memory present a cogent historical summary of this research. Declarative memory is taken to be propositional, either true or false—and depends upon the medial temporal lobe. Non-declarative memory is not propositional and is concerned with behaviors that are the result of past experience and learning. Habit memory is that form of non-declarative memory that refers to “gradually acquired dispositions or tendencies that are specific to a set of stimuli that guide behavior.”<sup>41</sup> Damage to the caudate nucleus impairs habit memory, but hippocampal damage does not.

Fink, Markowitsch, and Reinkemeier, et al. take the concept of ecphory within the cognitive arena to the next logical step: the neuro-logical. They considered episodic memory and attempt to “demonstrate the functional anatomy of ecphory of affect-laden autobiographical material.”

<sup>42</sup> Based on prior research, they hypothesized and demonstrated that these sites are activated in the ecphory of autobiographical episodic memory, “a network of primarily right hemispheric regions including the temporomedial and temporolateral cortex, amygdala and hippocampus-parahippocampus, insula, posterior cingulate cortex, temporoparietal cortex, and prefrontal cortex.”<sup>43</sup> These networks are considered to be components of the extended view of the limbic system implicated in affect-based memory and information processing. Moreover, Fink’s research indicated that there was no temporomedial, or posterior cingulate cortical activity during non-autobiographical memorial ecphory.

The amygdala is implicated in any emotional memory, and especially that of fear,<sup>44</sup> but is not implicated as a component of declarative memory, though it modulates it. Rolls suggests that the amygdala gives primary emotional value to each stimulus previously appraised.<sup>45</sup> There is strong evidence that the amygdala never forgets, and that the neurotransmitter, dopamine, which has deep connections with the limbic system, is implicated in not only depression, but also schizophrenia and psychosis and is compromised in depressive patients.<sup>46</sup> It also at times produces large quantities of endorphins. Moreover, there is now empirical evidence that the subjective sense of emotional intensity results in significant amygdala activation.<sup>47</sup>

The amygdala and entire autonomic nervous system can be activated by emotional imagery that is only mentally visualized, not just perceived externally. There is much evidence supporting this as demonstrated by skin conductance tests, fMRI images, and DOT neuroimaging (Diffuse

optical tomography), EEG, and EKG results. Though this contention is not questioned, and was utilized during Jung's lifetime, detail regarding it now is much more extensive and neurologically and neurochemically based. Specific site cells, such as in the hippocampus, amygdala, entorhinal cortex and parahippocampal gyrus, selectively respond to specific stimuli (such as faces). As we know, each face that is known holds various values for the perceiver: mom's face may bring different feelings from brother's face. Feeling value is significant, and it is significant that Whalen, et. al. research has demonstrated that the intensity of amygdala activation is affected differently dependent upon the emotional value of external stimuli.<sup>48</sup>

Affective neuroscience, as conceived by Jaak Panksepp, has the capability to contribute substantially to a more complete understanding of human emotions, *qua* human animal. He states, "One of the biggest intellectual challenges of the 21<sup>st</sup> century will be to construct unified images of human nature that do not denigrate our animal past or our future potentials as members of the human family."<sup>49</sup> His view of psychology considers the need to be constituted by three components: brain science, behavioral science, and "experimental science (which will have to include the best that even cognitive psychology, humanistic psychology, psychotherapy, and the other sub-disciplines of psychology have to offer)."<sup>50</sup> It is refreshing that he acknowledges psychological science *qua* human science.

### III. Jung's "complex doctrine" and its three systems of reference

To the extent that I managed to translate the emotions into images—that is to say, to find the images which were concealed in the emotions—I was inwardly calm and reassured.<sup>51</sup>

In a different way than the scientific neuron doctrine, Jung's complex doctrine is, as I said, also insufficient. I also indicated that merely combining these two doctrines

or exposing their essential unity will not suffice. What is needed is a re-thinking of Jung's contribution and *then* a clearer explanation and exposing the unity of the "neurocomplex doctrine." In order to complete this, I must explain what Jung's contribution is and why it is insufficient. I must, furthermore, seek to explain emotional reality, specifically the emotional image, by reconsidering it in the light of Zubiri's philosophy. In an article of this length, I shall not be able to express this thoroughly, but I submit that what is presented will be enough to give the gist of my research and findings. I utilize Zubiri's philosophy inasmuch as it is the only view I have encountered that allows an in-depth reconsideration of contributions from the various fields of emotional science while honoring the level of reality studied in each. Also, both Zubiri and Jung held to the reality of the psyche *qua* human personal reality, while other views eschew any such reality and any consideration of its possible existence.

Jung's intuitive grasp of human psychology, his years of therapeutic work, research, and medical training made him acutely aware of the role of emotions in psychological behavior, and especially the formation, maintenance, integration, or disintegration of a psychological complex. Throughout these years, he freely adopted terms from others, modified them to fit his system and expounded upon them in novel ways. In 1911, he wrote an article entitled "On the doctrine of the complex" and in 1934 another one carrying the title, "A review of the complex theory." In the initial article, he posits a doctrine, while in the latter a theory. Is this mere terminological difference, or is it conceptual? While the former states a more demarcated position, usually within a school of thought, the latter is more scientific. Perhaps the change is only this; perhaps there is more to it, and has to do with the theories being propounded by Golgi and y Cajal.

The first usage of "emotionally charged complex" that we find in Jung's

scientific writings provides a definition that was modified through his years of exploration. At this stage, as an assistant to Dr. P. E. Bleuler at Burghölzi Psychiatric Hospital in Zurich, Switzerland, Jung completed his word-association experiment using a standard Word Association Test (WAT) format. Other researchers used the WAT for exploring intellectual dispositions, mental alertness, and efficient mental control and assumed that the associations were purely verbal and artificial. Failure to respond was not considered by others to be important in these experiments. In the write up of the results, we read that a complex was "the sum of ideas referring to a particular feeling-toned event."<sup>52</sup> Many Jungians assert that this research led Jung "to a recognition of the existence of the complexes" and thus their discovery<sup>53</sup> while Hartman and Hayman<sup>54</sup> indicate that Jung's theoretical notion of the complex comes from Georg Ziehen's "feeling-toned groups of associations." The term was used by Freud, as well as by T. Ribot in 1883, though presented as a "complexus."

This prior system of usage provides one of three systems of reference that Jung later used for his own complex doctrine. In his 1904-1910 empirical investigations, Jung presented a wide range of emotional complexes as being aspects relating to his complex doctrine. We find him discussing various complexes: erotic complex; pregnancy complex; a complex associated with a new-born son; religious complex; stupidity complex; hospitalization complex; duel complex; furniture complex; theft complex; money complex; school complex. During his affiliation with Freud, he wrote about the Oedipus, Electra, and parental complexes. Later, Jung's complex theory was broadened to include more archetypal terms: anima complex; mother and father complex; shadow complex, ego complex, etc. In 1911 Jung wrote the article titled, "On the doctrine of the complexes" and asserts that it was he and Rilkin, in the WAT studies that introduced the term complex as referring to a private

"personal matter."<sup>55</sup> This claim is very debatable. Such personal matter was, he expressed, an aggregation of *ideas* connected by common emotional tone.

The terminology Jung uses for a feeling-toned complex is *gefühlsebetonter Komplex*. Feeling-tone derives from *gefühlsebetonte*, defined by Jung to mean, "an affective state accompanied by somatic innervations."<sup>56</sup> *Gefühl* means feeling, and for Jung it was used for the conscious process of giving value. In a 1905 work, regarding reaction times to the WAT, Jung defines a feeling-toned complex to be "a mass of images held together by a particular affect."<sup>57</sup> For Jung, emotion was not an activity of the person; emotions *happened* to the person. Emotions "are identical with certain physical conditions and are thus deeply rooted in the heavy matter of the body."<sup>58</sup> The image was the symbol of this psychophysical condition.

In a work preceding publication of the WAT findings, we find the use of "feeling-toned ideas" (1903b: 307). These ideas were the consequences of violent shock or accident, and of an emotional nature. Like many researchers at the turn of the 20<sup>th</sup> century, Jung was aware of the prolonged effect of intense emotions that endure well past the initiating event. Influenced by the work of J. M. Charcot and P. Janet in France and their dissociation theory of hysteria, Jung adopted many views and terminology of Janet in his psychological views. During this time, we find the beginning of many modern views of traumatic shock, discussed now as post-traumatic stress disorder (PTSD).

In another early work, he provided a modicum of clarity regarding terminology he uses. A recollection that was evoked by the WAT is not a random, meaningless response, but exactly those that derive from the memory of the individual and occupy their attention. These are "a *feeling-toned complex of ideas*."<sup>59</sup> In a later work, a feeling-toned complex is modified and defined in a more "scientific" manner. He informed his audience that "It is the *image* of a certain psychic situation which

is strongly accentuated emotionally...This image has a powerful inner coherence, it has its own wholeness, and in addition, a relatively high degree of autonomy..." (1934a: 201).<sup>60</sup>

Predating either of these usages and one that seems seminal in Jung's later ideas of psychological complexes is his 1902 doctoral dissertation, "On the psychology and pathology of so-called occult phenomena."<sup>61</sup> None of the biographers I have surveyed draw attention to this dissertation as being influential in the development of the complex doctrine, though Hayman draws the connection obliquely. The other writers, as asserted above, present the year as 1904 when Jung "discovered" these complexes. In his dissertation, Jung also mentions the "feeling-toned ideas" that may have been the roots of the dreams of "S.W." (his "subject") as well as our dreams.

Jung's fascination with Gnostic and occult phenomena is clearly asserted by him. It is this fact, among others, that has served to alienate his insights from serious scientific scrutiny or consideration. These interests remained with him his entire life and he discusses these phenomena frequently in his works. Jung found in psychiatry a way of integrating his two strongest areas of interest: medicine and the occult.<sup>62</sup>

As he himself reports, from August 1899- early 1900, Jung became an observer and recorder of séances held by a 15-year old female cousin, Hélène Preiswerk, referred to in the dissertation as S.W. Influenced by the philosopher T. Flournoy, as well as personal disposition, Jung attended these séances purportedly to scientifically scrutinize them. S.W. took the role of a spiritualist medium, much in vogue at the turn of the 20<sup>th</sup> century. Familiarity with the works of psychologists studying dissociation, automatism, somnambulism, hypnosis and hysteria enabled Jung to take an objective stance to the phenomena he observed; or so one might be led to believe.<sup>63</sup>

The young cousin in semi-

somnambulistic states spoke and acted as if there were at least two separate personalities. She was, to use a modern term, "channeling" the spirits of the deceased. One was identified as her grandfather; the second took various names and personalities. These personalities came and went as "they" pleased; often the appearance of different personalities depended upon who was in attendance. One somnambulistic ego, which Jung claimed was the continuation of her waking ego consciousness, was called Ivenes, a spirit entity who had to embody every two hundred years. The progression of the séances moved from "communications" from the spirit world while S.W. was in a trance state, to a complicated "mystic system" that she told Jung to diagram. Jung became aware that many of the discussions following the séances were later incorporated into her subsequent visions, locutions, and spirit communications. She developed elaborate themes of reincarnation, involving anyone who attended these sessions and connecting them in past lives to herself by maternity.

Jung wrote of the hysterical nature of these experiences by S. W., as well as the semi-somnambulistic aspect. In discussing this, Jung cites an 1884 work by the Frenchman, C. Richet. This citation includes the following in Richet's definition of semi-somnambulism: "He will have another person within him, acting, thinking, and willing, without his consciousness, that is, his conscious reflecting ego, having the least idea that such is the case."<sup>64</sup> Furthermore, this condition is dissociative in that there appear automatisms that act like a subconscious independent of ego consciousness.

Dissociation of consciousness is a psychological concept that comes from the French doctors, Charcot, Binet, and Janet. By this term was meant "the splitting off of one or more sequences of ideas; they separate themselves from the hierarchy of ego-consciousness and begin to lead a more or less independent existence."<sup>65</sup> These dissociated psychic elements were postulated

to have become autonomous within the psychic hierarchy, as well as producing automatic behaviors. This is clearly seen in early literature regarding the automatic symptoms of hysterics. Today we would refer to this automatic behavior as pertaining to habit memory, also referred to as implicit memory.

In Jung's 1935 Tavistock Lectures, presented at Tavistock Institute in England, he expresses his view that "A complex is an agglomeration of associations—a sort of picture of a more or less complicated psychological nature—sometimes of a traumatic character, sometimes simply of a painful and highly toned character."<sup>66</sup> Difficult situations are associated with physiological responses, involving the heart, blood vessel tone, intestinal reaction as well as breathing and skin sensitivity. These are normal reactions to intense emotions; if the situation arouses no emotional complex, they may be easily brushed off, "because it has no roots. It is not adherent or adhesive."<sup>67</sup> He stressed one important point, "the fact that a complex with its given tension or energy has the tendency to form a little personality of itself...in short it behaves like a partial personality."<sup>68</sup> This personality was assumed by Jung and extended to the personal and collective unconscious, which "consists of an indefinite, because unknown, number of complexes or fragmentary personalities."<sup>69</sup> There is even asserted to be a consciousness within the complexes. This dissociationist tradition is a second system of reference that Jung availed himself of in his creation of the complex doctrine.

The 1902 dissertation, though predating by at least two years in publication Jung's claimed "discovery," was derived from his occult interests. At the turn of the century, it was not uncommon for many scientists to take an interest in these phenomena, though those that did were often alienated greatly from the more narrowly defined scientific community. If we combine this fact with the low prestige of psychiatry, as well as Jung's own sense

of isolation from others, explicitly recalled in his memoirs, we may discern more elements leading to his favoring the later date of asserting such "discovery." To call attention to the dissertation might perhaps have undermined any serious acceptance of the new doctrine being proposed. The empirical foundations of psychology were shifting from a *psychological* approach based upon the reality of the psyche and following the path of other empirical sciences. Psychology was subsumed under the physical scientific measures: quantifiable evidence, objective phenomena, repeatable experimentation, strictly controlled experimental situations, and a constrained scientific framework. The psyche was being subsumed under the rubric of neural and mental monism, or behaviorism. In order to find some modicum of acceptance, Jung needed to comply.

The occult and Gnostic elements, then, become the third system of reference used in the creation of his complex doctrine.

Jung's intense focus on the images of emotional complexes, and making it the cornerstone of his theory of the unconscious, can also be explained by his psychological disposition: as an introverted intuitive person, he perceived these images more clearly than others of a different psychological type might. Indeed, when we consider the experience of an emotion and of a complex, we must factor in the personal disposition, that is, the personal habitual mode of functioning. Jung termed these *introversion* and *extroversion*. The private personal factor must be considered in our psychological views of emotions. We all experience emotions differently, with differing degrees of impact, intensiveness, duration, and physiological reaction. Moreover, some individuals experience the emotion more intensely *in their bodily sensations*, others are grabbed by the effect of the emotion's interference upon *their thought process*, and some become aware of it in their *evaluation of the situation*, while an intuitive individual might *observe the image of the situation*. These differ-

ences can be empirically discerned in a consideration of experiments on mental imagery: some people have clearer and more vivid images than others. "Imagery not only engages the motor system, but also affects the body, much as can actual perceptual experience."<sup>70</sup>

Even in this abbreviated synopsis, it is clear that Jung's complex doctrine has many elements from previous systems of reference that he attempted to blend into a *new* system of reference: a psychological system founded upon the reality of the psyche and the hypotheses of the unconscious and collective unconscious. As Zubiri analyzed and presented, when we seek to intellectually know what is beyond the field of reality in apprehension, we must do so based upon a system of reference. Jung used more than one system and by doing so seems to have confused modes of reality by asserting that a complex, an image and symbol of an emotion and of an emotional situation, could behave like an autonomous personality. Contra Freud, Jung held that the *via regia* to the unconscious is the complex, not the dream, for the complex is "the architect of dreams and symptoms."<sup>71</sup> The connection to the unconscious and the complex is central to Jung's doctrine and he avowed that "it is only through them [the complexes] that we are able to deduce its existence and constitution."<sup>72</sup> This centrality is expressed most cogently when, discussing unconscious fantasy systems that are only figurative, he affirms "that we accept as a necessary postulate the conception of psychic entities outside consciousness."<sup>73</sup>

It had been taken by Jung as a possibility that the emotional complex "could be" a partial personality. Based upon this possibility, he went in search for what this reality could be in its in-depth reality, though excluding the neurophysiological co-possibilities. This is the stance taken by most Jungians today, having embraced Jung's psychology as their system of reference. It is this very possibility that I question.

As Zubiri indicates most cogently re-

garding a system of reference and its postulates, "every alteration of a possibility implies in principle, if not the alteration, then the reconsideration of the all the rest. The crisis of a possibility puts the entire system in crisis."<sup>74</sup>

Most interesting and relevant to the current work is a line of inquiry that Jung does not develop regarding the complex. In an early article, after concluding that each association in the psychoanalytic technique of free association is integrally connected to the complex and that the initial idea may be a sign or symbol, he states:

This view is in agreement with already known psychological theories which maintain that the psychological situation at a given moment is nothing but the resultant of all the psychological events preceding it. Of these the most predominant are the affective experiences, that is, the complexes, which for that reason have the greatest constellating power. *If you take any segment of the psychological present, it will logically contain all the antecedent individual events, the affective experiences occupying the foreground, according to the degree of their actuality.* This is true of every particle of the psyche.<sup>75</sup>

The relevant aspect of this citation for the current discussion and one that I assert Jung seems to have dropped in his later approaches to the complex is what I have italicized. In fact, in the body of his collected works, this is the only comment I have found where he discusses the *actuality* of the complex. The "psychological present" refers to the present time of course. This could also be seen as referring to what is psychologically *present*, or as he put it, present *according to their degree of actuality*. For "affective experiences, that is, the complex," when they are present, are *actually* present and have *actuality* by occupying the foreground. When I consider this in the light of Jung's definition of the complex as "the *image* of a certain psychic situation", I find strong resonance with

Zubiri's philosophical approach, and a manner of re-thinking this doctrine. Jung's disposition to see a *personality* in the complex, and a point of consciousness in the unconscious is what needs re-thinking. We personify non-personal realities; we apprehend these emotional images as personifications.

The emotion is real, the image is real, and when an emotion *happens* to a person, the person is really affected by a real complex of the emotional image and neurophysiological response patterns. What science must do is to ascertain how emotion and image are coinciding realities that are co- *present in apprehension*. When cognitive scientists study the personal experience of an emotional image, its physiological and neurological concomitants, instead of utilizing guided scripts for controlling the unfolding of this image, studies could be undertaken where active imagination is allowed instead.<sup>76</sup> This may enable the image, which is something actual and present in awareness, to unfold more spontaneously. In this way, scientists using imaging methods (e.g., fMRI, SPECT) can learn more about the image as presented and unfolded naturally, and through dialogue, learn about the person's emotional reality. Furthermore, if Lang's view is taken seriously, we might be able to learn the *physiology of the emotional image*. Though this thought is scientifically offensive and confuses two orders of reality, it shows us that this notion of "physiology of an emotional image," using the further postulate of an engram, is metaphorical. It is accepted, though, as empirical. It is an attempt to represent in a reductive manner what cannot be fully grasped by such methods.

One final comment is warranted before considering how Zubiri's philosophy enables a re-thinking of this complex doctrine and neuron doctrine. Each approach considers the representation of an image, not only in consciously aware situations, but also in sleep and dream states. Recent studies suggest that when primary visual cortices are impaired and vision is cur-

tailed or restricted, or if the right temporo-parietal region is damaged, dream imagery is likewise affected. Concomitantly, the result of damage to a certain area of the cortex that is vital for color perception is that "the perception of color is lost and the capacity to imagine color or remember color is also lost, and dreams become colorless."<sup>77</sup> Furthermore, people with right cerebral damage, hypoplasia (underdevelopment of a nucleus) or damage to the corpus callosum have reported loss of dreaming, or dream only in words.<sup>78</sup>

I cite these merely to make a point: since Jung asserted that complexes personify as characters in our dreams, that dreams give us insight into our complexes, and that the complexes are the royal road to the unconscious, *if the neurological structure of the brain is damaged, the experience of dreaming changes*. We must begin to demarcate psychic from neurologic experience, in a scientific approach to the emotional complexes. Empirical studies can be done on persons with specific brain lesions and from these studies we can determine how their dreams have changed from before the lesions appeared or were excised. This may provide us with insights into how the complexes, as personifications of emotions, correlate with brain functioning, and possible functional roles of nuclei in this image formation. Likewise, in therapeutic situations with PTSD individuals who have had lesions (if there are any in this category), we can ascertain how these lesions and or their removal affect their emotional responsiveness to their memory or images of the traumatic event(s). These are specific tests for small populations and caution is warranted about their applicability to a general theory of complex-neurophysiologic interaction.

#### **IV. A Zubirian contribution to re-thinking emotional representation**

Zubiri indicates most cogently regarding a system of reference and its postulates that when one element is reconsid-

ered, there is a possibility that puts the entire system in crisis. This finds resonance with P. Churchland, a physicalist neurophilosopher who rightly expressed, "Empirical foundations of science and knowledge generally are not absolute and forever fixed; rather, they are foundations only relative to a particular encompassing network."<sup>79</sup> The networks of empiricism must shift to continue to be a viable philosophical approach to the interpretation of the data of a personal psychology *qua* private human reality. An emotion is private *and* relational, personal *and* social; it and its co-actual image pertain to the material *and* psychic modes of human reality. A reductive approach is insufficient to capture the in-depth reality of an emotional image, among other in-depth realities.

I refrain from expressing that an emotion or emotional image is *subjective* inasmuch as this term is not only unclear, but also much abused and largely negatively loaded. "Subjectivity" is often a label placed on private reality that is indeed real, though empirically unverifiable or unobservable by another subject. Many works have recently been written to counter this aversion to subjectivity in the sciences, though I favor Zubiri's expression. I do so because he is one thinker who took the abuse of this concept to task and affirmed private reality instead of subjective reality. Moreover, he presented us with an approach that does not mandate invoking a notion of intersubjectivity, but a re-thinking of what subjectivity might mean:

Subjectivity is not being a property of a subject, but simply being "mine", even though it may be mine by being of a real quality, i.e., by being this reality *de suyo*. Now, something can be *de suyo* even if fleeting, variable, and relative in a certain way, without ceasing to be real in its fleetingness, variability, and relativity. Fleetingness, variability, and relativity are characteristics of "unicity" but not of "subjectivity". This unicity is a characteris-

tic of a reality which is *de suyo* unique. Why? Because it concerns the actuation of things upon the sense organs. It is an actuation which is respective to the organ and the state in which it is encountered, and which is variable not only from some individuals to others, but also within the same individual, even in the course of the same perception.<sup>80</sup>

In this passage, Zubiri is referring to sensible qualities in sensory perception, though its applicability to emotional reality is warranted as will be demonstrated. There is no doubt that an emotion is real; no doubt that emotions are sometimes—or oftentimes, depending on the individual—accompanied by an image; and no doubt that when we apprehend these realities they are private and personal, and yet have very real implications for social reality as well. The emotion is *de suyo*, "in its own right" and the image is likewise *de suyo*, though fleeting, variable and relative in a certain way. Though the emotion and image require the neurophysiological processes to actualize, it takes the psychic reality and personal experience to co-actualize *this* emotion and *this* image which have meaning for *this* individual in respect to *this* current situation at *this* time.

An example is warranted. In therapeutic work, when a client first recalls a memory of child abuse of which he or she was a victim, it is often fraught with great pain and trepidation. One young woman with whom I have worked told me the story of how her father burned her hand to punish her. As she began telling the story, I watched her unconsciously begin to double her over body, as if to protect herself. Her hand was immediately withdrawn close to her bosom and she began to cry. When I asked her about this, she told me the story and how her father did this to her, how she remembered it happening. She also described the image that was co-actualized with this emotion. Weeks later, after integrating many other repressed

memories of her abuse, we returned to this particular memory and emotional image. Upon revisiting it, she did not move her body in a protective position, nor was the memory as painful. The image evoked at this time was also similar, but when we discussed the details, it had changed. It was still a memory of the same event; still an image of her father burning her hand; still an emotion evoked by her past, though it was now different because she had changed and the situation and time had changed. The emotional image had a unicity, in the sense described by Zubiri. Neurophysiologically we could determine the processes activated on minute levels, and with her personal and social history, we could understand why this particular image might be evoked. All components are necessary to comprehend the in-depth reality of emotional experience.

What is apprehended in an emotional image cannot be subject to external confirmation in the same manner as material science; we are dealing with a different order of reality. An externally apprehended object is real; an internally apprehended image is real, though the former may be more enduring and the latter more fleeting. An emotional image, or a memory image is taken to be a representation; some philosophers and scientists take any mental image as an inner representation. I say some, because Edelman argues for a non-representational memory, which "is a reflection of how the brain has changed its dynamics in a way that allows the repetition of a performance."<sup>81</sup> Memory, in this model,

...is dynamically *generated* from the activity of certain selected subsets of circuits...Memory in a degenerate selectional system is recategorical, not strictly replicative. There is no prior set of determinant codes governing the categories of memory, only the previous population structure of the network, the state of the value systems, and the physical acts carried out at a given moment. The dynamic

changes linking one set of circuits to another within the enormously varied neuroanatomical repertoires of the brain allow it to *create* a memory. The probability of creating a memory is enhanced by the activity of value systems.<sup>82</sup>

Memory considered thus is an act of imagination and dynamically creative, not merely representational.

If we take this view as having scientific viability, we are enabled to consider how an emotional image is not a *representation*, but a *presentation*. The dynamic nature of the brain and body as well as the dynamic nature of psychic life, when considered within the matrix of dynamic social and emotional experience, may evoke an image that is a presentation, symbolizing the current situation one is experiencing. Each of these components is dynamic, and this dynamic unity sometimes creates an image. An example is helpful here: a mother who always finds fault with her daughter's best efforts may have learned this pattern of parenting from her childhood. The daughter, even though a grown woman, still finds herself unable to find value in what she has accomplished. All she sees is what she has failed to accomplish or left incomplete. No matter how hard she tries, she feels she has failed. The image presented is persistent when this emotion arises: a young girl crouching down, holding her legs and rocking back and forth. Any project that she has undertaken that does not have the success she desires, she feels is a failure, though others may praise it and her efforts. Another example: we may have an image coincidental with the feeling of love for someone; yet we never imagine someone's face exactly as it is, but as it is presented in our image, in our memory. We never worry if it is not accurate or distorted, we *know* whom it is an image of; we know who is presented in the image, and we feel the love evoked. If this someone has died, the image may be evoked coincidental with grief and feelings of loss. The image is a

symbol not only of the other, but a symbol of the emotion as well.

What is being reconsidered in this article is the insufficiency of two explanatory systems which have each considered the emotional image, and each considered from the perspective of a representation. Each view uses a different form of empiricism; each approach utilizes prior systems of reference; each explanation seeks to comprehend the in-depth reality of the emotional image; each method seeks a way that allows intellectual access to this in-depth reality. While the neurocognitive method provides insight into the material underpinnings of the emotional image and Jung provides the psychological component, Zubiri's noergics provides a manner of exposing the unity these methods search for of the in-depth reality, the image that is co-actualized and present as an emotional reality.

Returning to Jung's comment as a point of departure, I shall consider how Zubiri's contribution of sentient intellection enables us to better comprehend this in-depth reality:

If you take any segment of the psychological present, it will logically contain all the antecedent individual events, the affective experiences occupying the foreground, according to the degree of their actuality.

When something is apprehended sentiently, it can be apprehended in its individual moment or in its "field moment." That is to say, we apprehend various realities respective to other realities and can consider one reality as an individual reality, or inasmuch as it is respective to the other realities in apprehension. Zubiri provides an example that I shall avail myself of here.<sup>83</sup> When we apprehend a landscape, we apprehend it *as a landscape* comprised of various real things in a unitary primordial apprehension. These things may also be variable, as a flowing brook or changes in lighting. Yet we apprehend the landscape directly and as one unitary apprehension.

We can also direct our attention to one aspect, a tree, or a brook, and by doing so, consider this real thing respective to the rest. In reality this is a tree; in reality that is a brook. The primordial apprehension of the landscape has now been modalized by declaring what one reality is in reality, respective to the others. Some things occupy the foreground of our apprehension, some the background, some stand out and others remain on the periphery and on the periphery, we have "the zone of the indefinite."<sup>84</sup> Things outside this zone may become lost, remain obscure or even unnoticed.

If we think of this in psychological terms, the emotion that is demanding our attention occupies the foreground of our awareness. Thoughts and other intellectual or psychological phenomena outside of this foreground are relegated to the background or become obscured to us while remaining on the periphery. When we are in the grips of an emotion, no matter how fleeting, it is imposed upon us with a force of reality that affects us and demands a response. We recognize it as a particular emotion, respective to the other emotions we have experienced in our lives. In some situations, we may even retain a familiarity with the emotion and its image—"this sadness feels like it did when my best friend left when I was a child"; "this distress happens every time I must face my teacher"; "this fear occurs every time I think about the accident." In these examples, it is not that the emotion and image *represent* a memory; they *present* a memory by being actually present and actually affecting us. Our response is dependent upon many factors, endogenous and exogenous to the individual. The response may be chosen, depending upon the particular emotion, or it may be evoked by the past habitual manner of responding.

Let us consider the emotional image. We can discuss an image as being impressive. Here this means that an image impresses us by its emotional or cognitive imposition. It stimulates our awareness by demanding attention. It may demand little

or much attention depending upon the valence of the emotion, the vividness and provocative intensity of its image, the situation one is in, as well as one's psychological condition.<sup>85</sup> That the image impresses us indicates that it is *other*, that it is some *reality* that *impresses us*. Though it is very fleeting, it is very real. It is not merely a stimulus. Science does not study just stimuli, but also studies realities. Emotions are stimulating realities and humans apprehend these as *emotional realities*, not just emotional stimuli.

An analysis of sentient intellection assists us in moving beyond the representational theories of memory or imagery. Every animal has distinct phylogenetic limits, including the human. Humans apprehend phenomena as realities due to the physical structure of our brain, the cortical structure and our intellective psyche, or as Zubiri express it, due to formalization. This is an organic aspect due to structural processes. Human apprehension, being an impression of reality and not just of stimuli, forces humanity to contend with things as realities. Animals contend with things as stimuli. Humanity, on the other hand, has an essentially different manner of contending with things and to be a viable species requires the ability to apprehend phenomena as reality, not just as stimuli:

Thus, in order to give suitable responses, the human animal cannot limit itself (as do the rest of the animals) to biologically "selecting" these responses, but must "elect" them, or even invent them, in function of reality. In an animal, the signs point to one or many responses, and in this chain of signed responses the animal biologically selects the response which it is going to give. But man lacks these *selection signs*. Thus he must determine his response as a function of the reality of the stimulus, of what he has apprehended, and of his own real apprehension. Man intellectually elects his response. To elect is to de-

termine a response in reality and according to reality; it is, if one wishes, a selection which is not "signitive" but "real."<sup>86</sup>

When humans sense and apprehend an imposing and stimulating reality, Zubiri maintains that the fact that we apprehend this as a reality implies that it is an act of sensing, and *at the same time* an act of intellective knowing. It is not a step-by-step process, but a structurally unified process. The *unity* of these two moments, the act of sensing, and the act of intellectively knowing it is a reality we are apprehending, is the exclusive, elemental, and radical act of intelligence. This is due to the physical and psychic structure of the human animal. As a result of this, the possibilities of responses we may make are practically unlimited and open-ended; our sentient structures no longer give assurance of suitable responses. We must choose from among a plethora of possible responses, or create one.

Our senses present reality to us in its different modes: reality as before us (sight), reality as auscultative (sound), reality as orientating (kinesthesia), reality as temperant, and for our purposes, *reality as affectant*. The senses analyze the impression of reality presented to us as *other*.

Mention must be made of the other reality, or realities, that an emotion is a response to. The range of emotions we experience present reality to us in different modes: joyful reality, painful reality, melancholic reality, fearful reality, ecstatic reality, dreaded reality, hopeful reality, etc. I find Zubiri's choice of words most poignant in that we *physically and emotionally* find ourselves at times, *apprehensive of reality* and *apprehensive in reality*. Reality provides us with genuine moments of apprehension. In the case of an external reality, the reality we apprehend and are apprehensive about is real before we apprehend it; our emotion is likewise real in that it imposes itself upon us with a force of reality in our apprehension of it, how-

ever subtle or unconscious this may be. This "before" is what Zubiri terms the *moment of prius*, that is, what is apprehended is something anterior to our apprehension of it. He informs us that this means the apprehension, the actuality of what is here-and-now present, "is always and only of what is "of its own", i.e. actuality of reality."<sup>87</sup> An emotion is real before being apprehended, and may, by remaining on the periphery influence us unconsciously until it occupies the foreground.

If the reality apprehended which evokes the emotion is an external reality, the history of the person and the relationship with this external reality must be considered and is a factor in the emotional response. Likewise, if the reality is private and personal—say a memory evoked by some thought or sensation (smell, sight, sound, etc.)—we must consider the personal reality and history of this other reality. Perhaps the individual has a recurring image of a traumatic experience, an image that has persisted for years and always evoked by the scent of perfume the mother wore. On the other hand, it may be a new image presenting itself in response to a sensation just felt. We may even establish relationships with emotional images, and though they may be fleeting, the emotion is familiar and we may have an "acquaintance" with the image. Some images we may be emotionally apprehensive about, others we may consciously evoke to induce an emotion, as an image that evokes the feeling of love for an absent companion. External and private reality has different content; both are formally real.

Following this line of thought, the emotion and its coinciding image is *other* than the person, and is apprehended as real. With *emotional reality*, the emotion as other has a reality that is physical, psychical, personal, and though "mine," it may have social facets. It also may be enduring or fleeting depending upon the nature of the emotion under consideration. It is less enduring than other forms of reality, though apprehended quantum realities are very fleeting as well. The *emotional*

*image* is, in most cases, even more fleeting, though not necessarily less arousing, imposing, coming with less force and definitely not less real. In psychological reality, the reality of the emotion presents a phenomenon that is *de suyo* before we apprehend it. Emotional reality is other, but it is not autonomous in the sense of having independent reality from the apprehendor. "My" emotion does not have reality before "I" have reality. "My" emotion does not exist independently of "me, myself." Though the emotion and the emotional image are real, we cannot construe an *otherness* similar to material or other modes of reality that exist more autonomously from "my" personal existence.

This does not mean, however, that there is no otherness. The otherness is apparent: "I am feeling angry"; "I am feeling afraid." We can surely assert, "I am afraid," but we know that this is a shorthand expression describing my apprehension of the emotion, not that I have become fear. Even using a positivistic manner of expressing: "Fear here now," we know that it refers to someone experiencing the emotion of fear, not that fear is independent of an experiencer. The content of the emotion differs from the content of heat, but the formality is the same: both are realities we apprehend and are actual in our impression.

As a moment of reality, the emotion and emotional image is *de suyo*, "in its own right".. The modes of presentation of reality, that is, the sentient modes of apprehension—sight, hearing, taste, smell, etc.—are physically integrated in multimodal brain nuclei. The physical sensory organs all have connections to specific and highly interconnected brain nuclei. The hippocampus has connections to all sensory cortices: the parietal and prefrontal cortices, the cingulate parahippocampal, retrosplenial and paralimbic cortices, the hypothalamus, reticular activating systems, mediodorsal and anterior thalamus, and the amygdala. The amygdala, in turn, connects to the orbital temporal pole, insula, temporal and prefrontal cortices, and

caudate accumbens, hypothalamus, thalamus, language and association cortices; likewise, it is a multimodal “junction” for all sensory systems, as is the orbitofrontal cortex.

In Zubiri’s noergics, he most accurately expressed that the structural unity of intellection and sensation reveals “above all, the diverse senses are not merely juxtaposed with each other, but on the contrary, overlap each other totally or partially.”<sup>88</sup> This finds verification in the very structure of the brain, and the corticalization of the brain may, indeed, have as its function the hyper-formalization of the human animal.

It does, however, argue against the emotional image—the complex in Jung’s psychology—being considered as a “splinter personality.” Following the Kantian *a priori* assumption, the WAT usage, the dissociationist and Gnostic-occult systems of reference, Jung postulated the existence of autonomous personalities within the psychic hierarchy. He even postulated archetypal complexes as mentioned above, that fulfill the *a priori* assumption more completely. Had he considered the neurological findings even of his time, had he integrated his psychological approach with the neurological approach, he would have been forced to re-consider this assumption. This is not to assert that he would have abandoned it; as Zubiri expressed, the *entification of reality* is a consequence of the conceptualizing intellect. Jung held to concepts and postulated many such concepts that fit his Kantian interpretations for his psychological approach. The complex cannot have personality, but it surely has reality. It is not a psychological *entity*, but is a psychological *reality*. Only a person can have personality. Again, this does not mean that the complex is not presented in apprehension as a personified reality; it appears to be so presented for our apprehension. That it is presented in a personified manner does not imply that it has personality. This distinction must, I submit, be made. The complex doctrine thus is benefited, it is argued, by

the inclusion of neurological science.

On the other hand, the neurological approach and view of the emotional image never asserts that it is not real, and obliquely affirms that it is real, neurologically speaking. Though the literature never discusses the reality of the image, it is an assumption, inasmuch as science investigates realities. Under the influence of the philosophy of mental monism, the scientist never considers the reality of the psyche, *qua* personal reality. This approach does not yet consider the *personal dimension* of the reality of the emotional image fully enough, and I do not refer to the *dimension of its personality*. This approach based upon the neuron doctrine is enhanced when it considers the contribution of Jung’s psychological doctrine. In a more integrated approach to the emotion and emotional image, we need both contributions; psyche needs soma and soma demands psyche for human embodied existence, as Zubiri has argued.

The image is a unique reality, fleeting, variable, and relative in a certain way. It pertains to a real person with a unique psyche, and the unique image apprehended can only be understood by reference to the reality of this person *qua* human psyche. There are assuredly similarities of imagery and emotions since we are all human, but no matter how precise our sciences, we will never know how each unique human reality experiences or apprehends any emotion or any emotional image that is imposed by reality.

### Conclusion

Zubiri’s contribution to comprehending human intellection, *qua* sentient intellection, enables us to understand more of the in-depth reality of what we apprehend. In this case, what we apprehend in reality is an emotion and an emotional image. This is a complex phenomenon, indeed. Utilizing Zubiri’s noergics I cannot fully concur with Jung when he states, “*In many cases emotion and symbol are actually one and the same thing.*” There is no

intellectual formula capable of representing such a complex phenomenon in a satisfactory way" <sup>89</sup>(1961: 570). While the first sentence is indeed accurate, the second sentence is not. There is in fact such an intellectual formula: this formula is given in our sentient apprehension of reality and is, as Zubiri analyzed and presented—sentient intellection. In the modalization of this intellection, we have sentient logos

and sentient reason. The emotion is a sentient mode of experiencing reality and apprehending reality *qua* affectant. Sentient reason proffers explanations to the in-depth reality of this emotional image. It will take time to expound emotional principles and canons that can be used as scientific and emotional methods to comprehend what this emotional reality is, "in reality itself."

## Notes

<sup>1</sup> Briefly, noetics is the term given to the philosophy of intelligence inasmuch as it considers intellection and the object of intellection. In Zubiri's re-thinking of intellection, he affirms that this noetic construct is insufficient since intellection is also an *ergon*, that is, 'a task, function or work' based upon the impression of reality. Thus, it is a noergic philosophy, not a noetic philosophy.

<sup>2</sup> Emotional science has many approaches: social, cognitive, neurological, biochemical, constructivist, etc. In this article, I am merely focusing on the approaches that are relevant to the discussion, while affirming that any full explanation of the human experience of emotion must be multidisciplinary and multifaceted. In each area of emotional science, however, Jung's psychological complex doctrine is not mentioned, thus my focus is delimited by considering this absence by contrasting it initially with a doctrine that is dominant. The field of post-traumatic stress syndrome, PTSD, affords a valuable resource in this reconsideration as well, but due to space limitations, has been omitted here. It is addressed in the book of which this article is a condensation.

<sup>3</sup> See e.g. P. Churchland, *Neurophilosophy*, MA: MIT Press, 1998; J. Austin, *Zen and the Brain*, MA: MIT Press, 1999; J. Panksepp, *Affective Neuroscience*, U.K: Oxford Univ. Press, 1998; K. Strongman, *The Psychology of Emotion*, N.Y: Wiley and Sons, 1998

<sup>4</sup> Lang, P.J. (1978) "A bio-informational theory of emotional imagery," *Psychophysiology*, 16 (6), pp. 495-511. Lang's more recent re

search continues this line of inquiry through the development of an International Affective Picture System (IAPS), a series of pictures that are shown to subjects while their brain is being monitored by a fMRI, a functional Magnetic Resonant Imaging unit.

<sup>5</sup> Carl Jung, "A review of the complex theory," in *The Collected Works of Carl Jung*, Vol. 8, U.K: Princeton Univ. Press 1981, paragraph 201; article date 1934. Jung's works include paragraph numbering. Subsequent references will be given in the following format: "article name" or *Book Name*; *CW #*: *reference paragraph #*, date of article publication—e.g. "A review of the complex theory," *CW* 8: 201, 1934. Except Volume 2, all *CW* volumes (1, 3-18, Supplement A) are published by Princeton Univ. Press. Volume 2 is published by Routledge Press, London, U.K. 1992 reprint.

<sup>6</sup> This article is a very condensed version of a full-length book, *Fear of Jung* that considers this issue (forthcoming by Karnac Books, U.K.).

<sup>7</sup> Xavier Zubiri, *Sentient Intelligence*, tr. by Thomas Fowler, Washington, DC: Xavier Zubiri Foundation of North America, 1999, p. 14. The work used for this article was downloaded from the Zubiri Foundation website, <http://www.zubiri.org/>. Pagination used follows the Spanish edition. References shall follow this format: Part One: *Intelligence and Reality (IRE)*; Part Two: *Intelligence and Logos (IL)*; Part Three: *Intelligence and Reason (IR)*.

<sup>8</sup> *IR*, p. 14

- <sup>9</sup> Though I make this distinction, it is heuristic. Psychology is a science of the psyche, but in its current reductive approaches, it follows an empiricism that has narrowed its referent. Psyche cannot be reduced to the material aspect of human reality, though any science of the psyche must include this aspect for a fuller embodied comprehension.
- <sup>10</sup> *Ibid.*, p. 206
- <sup>11</sup> *IRE*, p. 103
- <sup>12</sup> *Ibid.*, p. 211
- <sup>13</sup> *IL*, p. 132
- <sup>14</sup> This idea of “giving pause to think” is Zubiri’s expression for the intellectual activity of thinking *qua* open to reality. *IR*, p. 35. Reality gives us pause to think, and human sentient intelligence forces us to live thinking.
- <sup>15</sup> Taylor, S. E., Klein, L.C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A. R., & Updegraff, J. A. (2000). Female Responses to Stress: Tend and Befriend, Not Fight or Flight” *Psychological Review*, 107(3), 41-429.
- <sup>16</sup> Whalen, P.J., Rauch, S.L., Etcoff, N.L. McInerney, S.C., Lee, M.B., & Jenike, M.A. “Masked Presentations of Emotional and Facial Expressions Modulate Amygdala Activity without Explicit Knowledge,” *The Journal of Neuroscience*, Jan. 1, 18 (1), 1998, pp. 411-418
- <sup>17</sup> J. H. Austin, *Zen and the Brain*, Massachusetts: MIT Press 1999, p. 180, reminds and warns us, “Even our immediate primate relatives use different [neuro]transmitters within the dentate gyrus in strikingly different ways.”
- <sup>18</sup> J. Hillman, *Emotion: A comprehensive phenomenology of theories and their meanings for therapy*, Ill.: Northwestern University Press 1960, p. 166 (reprinted with new preface in 1992)
- <sup>19</sup> Strongman, op. cit., p. 20
- <sup>20</sup> A. Damasio, *The Feeling of What Happens*. N. Y.: Harvest Books, 1999, p. 125
- <sup>21</sup> L.W. Barsalou, *Cognitive Psychology: An Overview for Cognitive Scientists*, N.J.: Lawrence Erlbaum Associates 1992, p. 52
- <sup>22</sup> *Ibid.* pp. 14-15
- <sup>23</sup> See, e.g., S. Kemp, *Cognitive Psychology in the Middle Ages*, CT.: Greenwood Press, 1996
- <sup>24</sup> L.A. Cooper, & J. Hochberg, “Objects of the Mind: Mental Representations in Visual Perception and Cognition”, in *Cognitive Approaches to Human Perception*, N.J.: Lawrence Erlbaum Associates, 1994, p. 225
- <sup>25</sup> P. Churchland, *Neurophilosophy: Toward a Unified Science of the Mind-Brain*, Cambridge: MIT Press, 1986/1998, p. 460 (the first date is the original print date, the later is the 10<sup>th</sup> printing date).
- <sup>26</sup> C. Macleod & A. Mathews “Cognitive approaches to emotion and emotional disorders” in, *Annual Review of Psychology*, Volume: 45, 1994. Retrieved 01-2003 from www.questia.com
- <sup>27</sup> Cited in Strongman, K. *The Psychology of Emotion: Theories of Emotion in Perspective*, (4<sup>th</sup> ed.), U.K.: Wiley & Sons, 1996 p. 63.
- <sup>28</sup> R. Semon, *The Mneme*, trans. L. Simon; London, 1921, p. 24
- <sup>29</sup> E. Tulving, *Elements of Episodic Memory*; N. Y.: Oxford University Press, 1983, p. 168
- <sup>30</sup> *Ibid.* p. 176
- <sup>31</sup> *Ibid.* p. 171
- <sup>32</sup> *Ibid.* p. 158
- <sup>33</sup> C. Lashley, *The Neuropsychology of Lashley: Selected Papers*. Eds., Hebb, D. O., Morgan, C. T., Nissen, H. W. N.Y.: McGraw-Hill, 1960, p. 479
- <sup>34</sup> *Ibid.* p. 498
- <sup>35</sup> See, e.g. the textbooks by M. Rosenzweig, A. Leiman, S. M. Breedlove, *Biological Psychology*; Mass.: Sinauer Associates, Inc., 1996; as well as T. Smock, T., *Physiological Psychology: A neuroscience approach*; N.J.: Prentice Hall, 1999
- <sup>36</sup> C. Lashley, op. cit., p. 501
- <sup>37</sup> Y. Dudai, *The Neurobiology of Memory: Concept, Findings, Trends*, Oxford: Oxford University Press, 1989, p. 166
- <sup>38</sup> Tulving, op. cit., p. 159
- <sup>39</sup> Only recently have I been given a fundamentally different view of engrams, proffered by Dr. Mario Rocco, a Zubirian scholar and the Head of the Electroneurobiological Research Lab in Argentina. In an article delineating some findings from this research group, we find an assertion that “Engrams are a purely fictional concept.” Mariela Szirko “Effects of relativistic motions in the brain and their

- physiological bearing," retrieved 04-15-2004, *Electroneurobiologia* 2003; 11 (2), pp. 14-65; <http://electroneubio.secyt.gov.ar/index2.html>
- <sup>40</sup> B. Milner, L. Squire, E. Kandel, "Cognitive Neuroscience and the study of memory," *Neuron*, Vol. 20, 1998 pp. 445
- <sup>41</sup> *Ibid.*, p. 450
- <sup>42</sup> G. Fink, H. Markowitsch, M. Reinkemeier, T. Bruckbauer, J. Kessler, & W-D Heiss, "Cerebral representation of one's own past: neural networks involved in autobiographical memory," *Journal of Neuroscience*, 16:13, 1996, pp. 4275
- <sup>43</sup> *Ibid.*, p. 4277
- <sup>44</sup> See e.g. J. E. LeDoux, "Emotion: clues from the brain"; *Annual Review of Psychology*, Vol. 46, 1995, pp. 209-264; *The Emotional Brain: the mysterious underpinnings of emotional life*; N.Y.: Simon & Schuster, 1996
- <sup>45</sup> E. T. Rolls, "A theory of emotion and its application to understanding the neural basis of emotion", In Oomura, Y., (Ed.) *Emotions: Neural and Chemical Control*, Tokyo: Japan Scientific Societies Press, 1986, pp. 325-344; "A theory of emotion and consciousness, and its application for understanding the neural basis of emotion," in Gazzaniga, M. S. (Ed.), *The Cognitive Neurosciences*, Cambridge: The MIT Press, 1995, pp. 1091-1106
- <sup>46</sup> S. N. Haber, & J. L. Fudge, "The Interface Between Dopamine Neurons and the Amygdala: Implications for Schizophrenia," *Schizophrenia Bulletin*, National Institute of Mental Health. 23:3, 1997, pp. 471-482.
- <sup>47</sup> T. Canli, Z. Zhao, J. Brewer, J. D. Gabrieli, L. Cahill, "Event-Related Activation in the Human Amygdala Associates with Later Memory for Individual Emotional Experience," *The Journal of Neuroscience*, Vol. 20 RC99, 2000; retrieved 02-18-2002 from <http://www.hneurosci.org/cgi/content/full/4570>
- <sup>48</sup> P. J. Whalen, S. L. Rauch, N. L. Etcoff, S. C. McInerney, M. B. Lee, & M. A. Jenike, "Masked Presentations of Emotional and Facial Expressions Modulate Amygdala Activity without Explicit Knowledge," *The Journal of Neuroscience*, Jan. 1, 1998, 18 (1), pp. 411-418
- <sup>49</sup> J. Panksepp, op. cit., p. 339
- <sup>50</sup> *Ibid.*, p. 12
- <sup>51</sup> Jung, *Memories, Dreams, Reflections*, N.Y.: Vintage Books, 1963, p. 177
- <sup>52</sup> Jung, "The associations of normal subjects," *CW* 2: 167, footnote 18, 1904-1905.
- <sup>53</sup> See, e.g., B. Hannah, *Jung: His Life and Work*, N.Y.: Perigree, 1976; A. Stevens, *On Jung*, UK: Penguin Books 1990
- <sup>54</sup> Hartman, G. "A time line of the history and development of Jung's works and theories (1902-1935)", Retrieved 08-2002 from <http://www.cgjungpage.org>; Hayman, R. *A Life of Jung*, New York: W.W. Norton & Company, 2002
- <sup>55</sup> Jung "On the doctrine of the complexes," *CW* 2: 1350, 1911/1913
- <sup>56</sup> Jung, "The psychology of dementia praecox," *CW* 3: 83, 1907
- <sup>57</sup> Jung, "The reaction-time ratio in the association experiment," *CW* 2: 602, 1905
- <sup>58</sup> Jung, "The Tavistock Lectures," *CW* 18: 317, 1935
- <sup>59</sup> Jung, "The psychological diagnosis of evidence," *CW* 2: 733, 1906
- <sup>60</sup> Jung, "A review of the complex theory," *CW* 8: 201, 1934. The editors of the *Collected Works* volumes indicate this difference of definitions in a couple places. See, e.g., *CW* 1: 168, fn. 2a; *CW* 2: 167, fn. 18.
- <sup>61</sup> *CW* 1: 1-150
- <sup>62</sup> See, Jung, op. cit., 1963, p. 108.
- <sup>63</sup> Jung actually was involved in these séances with his cousin as early as 1895 when he was 19 and his cousin 13. They lasted 4 years. Furthermore, Jung failed to mention some personal psychological facts about his cousin that are very germane to understanding her dissociations, and Jung's active involvement in the séances. If Jung would have drawn attention to his dissertation, it might have caused personal and professional problems inasmuch as Hélène's family account would have shown the difference from Jung's account. There was also a romantic interest by Hélène that influenced her behaviors. For more information see Hayman, op. cit., and Skeat, B. Trauma, "Transference and Transformation: A study of Jung's treatment of his cousin Hélène," 1995. Retrieved 10-18-2002 from <http://www.cgjungpage.org>.

- <sup>64</sup> Jung, "On the psychology and pathology of so-called occult phenomena," CW 1: 77, 1902
- <sup>65</sup> Jung, "The psychology of dementia praecox," CW 3: 55, 1907
- <sup>66</sup> *Op. cit.*, para 148, 1935.
- <sup>67</sup> *Ibid.*
- <sup>68</sup> *Ibid.*, para. 149
- <sup>69</sup> *Ibid.*, para. 151
- <sup>70</sup> S. Kosslyn, G. Ganis, & W. Thompson, "Neural foundations of imagery," *Neuroscience*, Vol. 2, p. 641, 2001
- <sup>71</sup> Jung, "A review of the complex theory," CW 8: 210, 1934
- <sup>72</sup> *Ibid.*
- <sup>73</sup> Jung, "The theory of psychoanalysis," CW 4: 256, 1913
- <sup>74</sup> *IR*, p. 222
- <sup>75</sup> Jung, "The Freudian theory of hysteria," CW 4: 44, 1908 (emphasis added)
- <sup>76</sup> In active imagination, the subject is encouraged to allow the image and situation to unfold of its own accord, merely following the lead of the image presented. This is commonly used in Jungian and other therapeutic approaches and finds strong empirical and therapeutic viability.
- <sup>77</sup> G. Edelman, & G. Tononi, G. *A Universe of Consciousness: How Matter Becomes Imagination*, NY: Basic Books *op. cit.*, p 53, 2000
- <sup>78</sup> R. Joseph, *Neuropsychology, Neuropsychiatry, and Behavioral Neurology*, N. Y.: Plenum Press, 1990
- <sup>79</sup> Churchland, *op. cit.*, p. 271
- <sup>80</sup> *IRE* 181-182
- <sup>81</sup> Edelman, *op. cit.*, p. 95
- <sup>82</sup> *Ibid.*, p. 98
- <sup>83</sup> *IRE*, p. 258
- <sup>84</sup> *IL*, p. 23
- <sup>85</sup> Situation here is used broadly to refer to the current physical, mental, spiritual, and social conditions the individual finds herself among.
- <sup>86</sup> *IRE*, p. 73
- <sup>87</sup> *IRE*, p. 141
- <sup>88</sup> *IRE*, p. 107
- <sup>89</sup> Jung, "Symbols and the interpretation of dreams," CW 18: 570, 1961

### Biography of the author

Theo Cope is a PhD. candidate in Analytical and Chinese Cultural Psychology at South China Normal University in Guangzhou, capital of Guangdong Province, where he also teaches psychology. He received his MA in psychology from Landegg University in Switzerland, and completed courses for Counseling Psychology at Kent State in Ohio, USA. He has published one book and a second is forthcoming in 2006 from Karnac Press in the UK titled: *Fear of Jung: The complex doctrine and the science of emotions*. This article is a reworking of a section of this latter book. Theo is married and together with his wife have three adult offspring, two of whom also reside in China.