

Oneness, The Brain, and Unconscious Judgments in Moral Psychology and the Philosophy of Wang Yangming (1427-1529)

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Draft dated June 2016

(For inclusion in Philip Ivanhoe, Owen Flanagan, and Victoria Harrison, The Oneness Hypothesis: Beyond the Boundary of Self (Columbia University Press). This chapter was pulled from the volume just before it went to the printers because a feminist academic was offended by (her perception of) my past.)

In this essay, I shall draw on some empirical research to support four observations.

The first is that (1) the perception of oneness (or “self-other merging”) — rather than the experience of empathy — is the primary and more direct motivator of helping behavior.¹¹¹

The next three observations are that (2) this perception of oneness (and hence, moral motivation) is co-dependent on some natural facts about the subject’s brain. (3) The judgments that lead to moral behavior are mostly unconscious and are not often emotions. And, (4) it is possible to train one’s unconscious intuitions through arduous practice.

Moreover, I shall demonstrate that all four points are anticipated by Neo-Confucianism and in the philosophy of Wang Yangming (1472-1529) in particular.^[2]

I. Oneness vs. Empathy^[3]

Empirical research on the sense of oneness has shown that it, rather than empathy, is most directly responsible for motivating helping behavior. One of the most prominent theories in psychology that attempts to explain altruistic behavior has been that of C. Daniel Batson and associates.^[4] According to Batson's empathy-altruism hypothesis, purely altruistic acts can occur consistently if they are preceded by the specific psychological state of empathic concern for the other. They define "empathic concern" as an emotional reaction characterized by feelings described as compassion, tenderness, softheartedness, and sympathy. They and other researchers working independently^[5] have demonstrated that generally, under conditions of empathic concern for the other, individuals help more frequently in what appear to be altruistically motivated attempts to improve the other's well-being rather than an egoistically motivated attempt to improve their own.

In response to this prevailing view, Robert Cialdini and his research associates proposed and tested a theory that attributes helping behavior to the merging of self and other.^[6] Building on earlier research by Arthur and Elaine Aron, Mark H. Davis, and others, Cialdini and his research team tested their self-other merging hypothesis in three studies closely resembling the conditions under which Batson and associates tested their empathy-altruism model, using perspective-taking instructions and the variable of relationship closeness (Aron and Aron 1986; Aron, Aron, and Smollan 1992;

Aron, et al., 1991; Davis et al., 1996). On four categories of closeness—from near stranger to acquaintance to good friend to close family member—as subjects took the perspective of those closer to them, the degree to which they were willing to offer help increased dramatically compared to the degree of empathic concern they felt.

That is, “controlling for oneness eliminated the influence of empathic concern, whereas controlling for empathic concern left oneness a powerful predictor of willingness to help.”¹⁴ Their path analysis revealed further that empathy increased willingness to help only through its relation to perceived oneness, suggesting that empathy affects helping primarily as an emotional signal of oneness, thereby undermining the altruism-empathy model.

Other studies have shown that a deep experience of oneness can cause people to act as if some or all aspects of the other are partially their own, accompanied by a sense of fusion between the self and the other. For instance, in the earlier Aron and Aron study, their self-expansion model holds that people are motivated to enter and maintain close relationships to expand the self by incorporating resources, perspectives, and characteristics of the other in the self (Aron and Aron 1986).

Similarly, other studies on group oneness have demonstrated the powerful effect of group identification on participants’ willingness to restrict individual gain to preserve collective good. Positive evaluations and liking for others can be induced simply by the knowledge of a shared, common identity. This is a phenomena that researchers have called “depersonalized social attraction,” and it is closely connected to the idea of a

“social self” that is a more inclusive self-representation in which relations and similarities to others become central to one’s self concept (Hogg 1992; Brewer and Gardner 1996). While a full assessment of this debate is beyond the scope of this paper, this brief summary should suffice to elucidate the significance of oneness to moral motivation.

In Neo-Confucian moral psychology, the experience of oneness plays an integral role in motivating moral behavior, for while empathy and oneness are closely linked, Wang Yangming and many other Neo-Confucians seem to hold that oneness and not empathy leads to moral motivation.

In his celebrated essay, “Inquiry on the *Great Learning*,” Wang invokes the power of oneness: “The great man regards Heaven, Earth, and the myriad things as one body. He regards the world as one family and the country as one person. As to those who make a cleavage between objects and distinguish between the self and others, they are small men...” (Wang 1963, 272). For Wang, this metaphysical unity extended not only to people and animals but also to plants and inanimate objects:

[W]hen [the great man] sees plants broken and destroyed, he cannot help a feeling of pity. This shows that his humanity forms one body with plants. It may be said that plants are living things as he is. Yet, even when he sees tiles and stones shattered and crushed, he cannot help a feeling of regret. This shows that his humanity forms one body with tiles and stones. This means that even the mind of the small man must have the humanity that forms one body with all. Such a mind is rooted in his Heaven-

endowed nature and is naturally intelligent, clear, and not beclouded. (Wang 1963, 272-273, translation modified).

For Wang and most Neo-Confucians, everything there is constituted by some combination of *li* 理 (principle) and *qi* 氣 (matter-energy). *Qi* is the stuff of which the universe is made. It exists in various grades of purity. Although all things possess all the *li* of the universe within them, because of the impurity of the *qi* of which they are composed, some *li* are obstructed and are not easily perceived by the *xin* 心 (mind). *Li* refers to the way a thing or state of affairs ought to be. When things or states of affairs are not in accord with *li*, they are deemed deviant. Differences in the combinations of *li* and *qi* are what account for the differences between things. For Wang, every failure to act correctly is a result of a failure to grasp the *li* (“principle” or “principles”) that are already in the mind. The practice of self-cultivation in Wang’s philosophy is basically the process of unearthing and uncovering the obscured thoughts already in our minds (*xin*). Because even uncultivated people share their *qi* and universal *li* in common with the rest of the universe, they too would feel pity and regret at the damage to plants, tiles, and stones, though they feel it much less than those who are morally cultivated. It is not that they feel hurt to see them damaged; they feel the hurt as their own, as a personal injury to an extension of their own bodies (Ivanhoe 2002, 29).

Elsewhere Wang expounds in detail on this theme:

At bottom, Heaven and Earth and all things are my body. Is there any suffering or bitterness of the great masses that is not disease or pain in my own body? Those who are not aware of the disease and pain in their own body are people without the sense of right and wrong... If gentlemen of the world merely devote their effort to extending their *liangzhi* 良知 (intuitive moral faculty), they will naturally share with all a universal sense of right and wrong, share their likes and dislikes, regard other people as their own persons, regard the people of other countries as their own family, and look upon Heaven, Earth, and all things as one body. When this is done, even if we wanted the world to be without order, it would not be possible. When the ancients felt that the good seemed to come from themselves whenever they saw others do good, when they felt that they had fallen into evil whenever they saw others do evil, when they regarded other people's hunger and drowning as their own, ... they did not purposely do so to seek people's faith in them... Oh, how simple and easy was the way of sages to govern the empire!^[8]

Forming one body with the universe consists in cognitively comprehending the underlying unity and experiencing the concomitant feeling of a pervasive oneness with the cosmos and all its constituent parts.

If, as Wang maintains, the perception and experience of oneness is the driving factor motivating moral behavior, then it should be clear why self-centeredness (*siyu* 私慾) is so dangerous.^[9] Self-centeredness drives a wedge between the individual self and the rest of the world. So even if someone understand theoretically that she should act filially to her parents, unless she perceives her oneness with her parents, she won't be

induced to act lovingly to them. In teaching about the principle of filial piety, Wang draws this connection: “If the mind is free from self-centered human desires and has become completely identical with the Heavenly Principle, ... then in the winter, one will naturally think of how cold one’s parents feel and seek to provide warmth for them, and in the summer, one will naturally think of how hot the parents feel and seek to provide coolness for them” (Wang 1963, S. 3, translation modified).

At an even more basic level, being in an experiential state of oneness just is being in accord with *li*: “‘What is the difference between being in accord with *li* and having no self-centered mind?’ The Teacher said, ‘The mind is *li*. To have no self-centered mind is to be in accord with *li*, and not to be in accord with *li* is to have a self-centered mind...’” (Wang 1963, S. 94, translation modified).

One of the main goals of Neo-Confucian epistemology and moral cultivation is to attain, sustain, and grow the experiential state of oneness. Wang’s theory of knowledge and action (*zhixingheyi* 知行合一) posits that moral action naturally ensues from the oneness state. So the crucial step is achieving and living in the experience of oneness. Wang’s “self-centeredness” (*si* 私) cannot merely be “putting one’s desires above those of others.”^[10] It is a deeper philosophical concept, integrally related to the underlying metaphysical unity of the universe, which the sage — as our normative ideal — experiences as a oneness with all things.

II. Oneness and the Brain

Not only has empirical research shown that a sense of oneness motivates moral behavior, multiple studies have evinced a link between the neuropsychological state of oneness and a specific cerebral structure, the right parietal lobe. This relationship has been confirmed with both clinical and neuroscientific samples, including persons with traumatic brain injury (Johnstone et al. 2012; Johnstone and Glass 2008), individuals having surgery for parietal lobe brain tumors (Urgesi et al. 2010), and Buddhist monks and Franciscan nuns engaged in meditative practices (Brefczynski-Lewis et al. 2007; Newberg et al., 2003; Newberg et. al., 2001).

The right parietal lobe is associated with defining or perceiving the self (Decety and Sommerville 2003; Uddin et al., 2005), self-related cognition (Platek et al., 2004), own-body perception (Blanke and Arzy, 2005), and autobiographical memory (Lou et al., 2004). Research has further shown that the right inferior parietal cortex “may be critical in distinguishing the self from the other” (Decety and Moriguchi 2007: 9) and that repetitive transcranial magnetic stimulation to the right inferior parietal lobe (but not the left inferior parietal lobe) “selectively disrupts performs on a self-other discrimination task” (Uddin et al., 2006: 65).

Further support for these experimental research findings are clinical studies suggesting that injury to the right parietal lobe is associated with “disorders of the self” (Feinberg and Keenan 2005), impairments in self-awareness (e.g., anosognosia; McGlynn and Schacter 1989), difficulties identifying the “self” in space (i.e., left-sided spatial neglect;

Mesulam 2000), and impairments in understanding how the “self” is perceived by others (Brozgold et al., 1998).

Since increased activity in the right inferior parietal lobe has been associated with the proclivity to focus on the self, a reasonable hypothesis would be that decreased functioning of the right inferior parietal lobe would lead to a decreased proclivity to focus on the self, a diminished capability to distinguish self from others, or an increased selflessness or sense of oneness — which is suggested by both experimental and clinical research findings.

In one of the first studies of the neuropsychology of selflessness, Johnstone and Glass proposed such a hypothesis and used neuropsychological tests to evaluate the functional integrity of different cerebral structures (Johnstone and Glass 2008), which indicated that decreased function in the right parietal lobe (measured by the Judgment of Line Orientation Test: Benton, et al., 1983) was significantly correlated with an increased sense of selflessness (using the Index of Core Spiritual Experiences: Kass et al., 1991), although measures of frontal and temporal lobe functioning were not.

Johnstone, et. al., (2012) later replicated, confirmed, and extended their earlier findings that relatively weaker right parietal lobe functioning was significantly correlated with a greater sense of selflessness. Other studies of people with brain tumors supported these findings that “selected damage to the left and right inferior posterior parietal regions induced a specific increase of self-transcendence” (Urgesi et al., 2010: 39).

Neuropsychological studies of Buddhist monks and Franciscan nuns suggest that decreased activation of the right parietal lobe is related to the decreased sense of the self reportedly experienced during deep states of meditation or prayer. Newberg et. al., (2001) used single-photon emission computed tomography (SPECT) imaging to study meditating Buddhist monks and recorded significant increase in blood flow (indicating brain activity) in the prefrontal cortex and posterior superior parietal lobe but significant decreases in the blood flow to the right inferior parietal lobe. Newborn et. al., (2003) later performed a similar SPECT study on Franciscan nuns engaged in verbal meditation and found a strong inverse relation between increased blood flow to the prefrontal cortex and decreased blood flow to the right inferior parietal lobe. The participants of both studies reported an increased sense of universal connectedness, a greater sense of unity over diversity, and a decreased awareness of the self. Brefczynski-Lewis, et. al., (2007) used function magnetic resonance imaging (fMRI) to study Tibetan Buddhist monks engaged in meditation and reported that deactivation of the right inferior parietal lobe occurs during a specific type of meditation — *metta bhavana* (“loving-kindness-compassion”) meditation — practiced by these Tibetan monks.

These experimental and clinical research findings support the broader conclusion that the experience of oneness is correlated to decreased blood flow in a specific part of the physical brain, the right inferior parietal lobe. It would be reasonable to hypothesize that decreased brain activity in this part of the brain would lead to an increased sense of

oneness in the subject.^[11] Put differently, moral behavior can be motivated by decreasing the flow of blood to a specific section of the physical brain.^[12]

That the experience of oneness can be so dependent on the physical brain is also consistent with mainstream Neo-Confucian philosophy and with the moral metaphysics of Wang Yangming. For Wang and most Neo-Confucians, everything there is constituted by some combination of *li* and *qi*. *Li* 理 refers to the way a thing or state of affairs ought to be. When things or states of affairs are not in accord with *li*, they are deemed deviant.

As with most Neo-Confucians, Wang believed that the mind (*xin* 心) was made of the same *qi* (“matter-energy”) as all physical things, including gas, liquid, and solid matter (Tien 2010). In traditional Chinese metaphysics, the spirit, mind, and physical objects existed along a continuum of rarefied to dense *qi*. Wang held that all things, including animals, plants, heaven, earth, spiritual beings, and himself are composed of the same matter-energy. Because they have their existence in a common substance, they affect and influence one another on a metaphysical and physical level (Tien 2012; Wang 3:157/337).

Moreover, Wang believed that every instantiation of *li* (which, among its many definitions, meant the “normative ideal”) had to be accompanied by *qi* because *li* was always embedded in *qi* (Tien 2010). This is the standard model in Neo-Confucianism. In 2:106/153, Wang reiterates this common view: “*Li* is the order by which *qi* operates. *Qi* is

that whereby *li* functions. Without order, it cannot function. Without functioning, there can be nothing to reveal what is ordered.”

The process of self-cultivation for Wang was a matter of removing the blind spots of “self-centered thoughts” (*siyu*) so that one could clearly extend the moral mind, that is, so that one is able to perceive and feel the appropriate response to the morally significant situations one encounters in life (Tien forthcoming; Tien 2004). These “self-centered thoughts” were also made up *qi*. Wang employed Buddhist-inspired similes to illustrate the relation between the mind and these “self-centered thoughts.” Just as the sun shining behind clouds or a clear mirror hidden beneath dust, the mind must be unobstructed by the “clouds” and “dust” of self-centeredness for it to apprehend *li* and lead us to the right moral judgments.¹¹³ That the sense of oneness would be located in a specific region of one’s *qi* is exactly what would be expected on Wang’s metaphysics of mind, as Wang held that the *qi* of the mind was constituted by the most rarefied *qi* of the body (Tien 2010).

III. Unconscious Beliefs, Emotions, and Moral Behavior

An important implication of the fact that the sense of oneness is correlated with the right parietal lobe is that this is a part of the brain not associated with conscious reasoning. And if it is not a conscious process, then it is an unconscious one. Modern philosophy has largely neglected the significance of the unconscious. In recent decades, however, a large body of empirical research has emerged in diverse disciplines and fields, demonstrating a fundamental tenet of cognitive-behavioral therapy and of much of clinical psychology, more broadly — that much of mental life is unconscious,

including cognitive, affective, and motivational processes. This empirical research suggests significant revisions in the philosophical understanding of moral psychology. One of the most important areas for re-examination is the relationship between moral motivation and moral behavior. Recent experimental research indicates that unconscious processes determine many of our moral judgments and drive much of our moral behavior. Thus, to bring about moral behavior, such as altruism or helping behavior, it would be wise to create an effect at the level of the unconscious.

Unconscious thoughts and feelings are those that occur outside the scope of cognitive awareness. Empirical evidence suggests that unconscious phenomena include automatic skills, automatic reactions, perceptions, thoughts, habits, hidden desires, and phobias. Although such thoughts and feelings are not in our conscious awareness, they nonetheless influence other of our cognitive processes, as well as our behavior. I am not here referring to any specialized usages of the term “unconscious,” such as in the Freudian or Jungian senses.

In recent decades, a considerable body of empirical research in psychology, economics, neuroscience, and the intersections between these disciplines, as well as in other academic and practical fields, have led to the conclusion that many of our day-to-day judgments and behaviors — including many of our moral ones — are driven by unconscious, automatic, implicit processes rather than by conscious, controlled, explicit processes. This is also known as the “dual process theory.”^[14]

This new perspective marks a sharp break from traditional, “rationalist” approaches, in which moral evaluations derive from conscious reasoning, and moral cultivation reflects an improved ability to articulate sound reasons for such conclusions. While the contrast between unconscious judgments and conscious reasoning is supposedly stark, the differences between the rationalist and dual process theories are in actuality not as clear-cut. The various dual process models involve reasoning at some point, and rationalist approaches often assume some innate moral knowledge.

The major point of tension is in the differing emphases. Rationalists ascribe the real work to controlled processes, which are conscious, heavily reliant on verbal thinking, and ordinarily slow, while dual process proponents say it’s done by unconscious, automatic processes, which are fast and effortless. The power of these unconscious processes in driving decisions and behavior have been well documented in Nisbett and Wilson 1977, Cialdini 2016, Cialdini 1984, Haidt 2001, Haidt 2006, Haidt 2012, Thaler 2009, Kahneman 2012, Ariely 2010, Ariely 2012a, Ariely 2012b, among others.

One common misconception is that the dual process theory is based on a dichotomy of cognition versus emotion. Instead, the main dichotomy is between conscious and unconscious processes. Jonathan Haidt, a prominent proponent of the dual systems approach, addresses this by pointing out that emotions depend on an appraisal, judgment, or interpretation of the phenomena or events. In other words, emotions depend on cognition; they are a kind of information processing (Haidt 2012: 51). Hence, the dichotomy breaks down as cognition is always involved in emotion:

Part of the problem was that my thinking was entrenched in a prevalent but useless dichotomy between cognition and emotion... *[M]oral judgment is a cognitive process, as are all forms of judgment...* Moral emotions are one type of moral intuition, but most moral intuitions are more subtle; they don't rise to the level of emotions... *Intuition* is the best word to describe the dozens or hundreds of rapid, effortless moral judgments and decisions that we all make every day. Only a few of these intuitions come to us embedded in full-blown emotions... [O]nce I stopped thinking about emotion versus cognition and started thinking about intuition versus reasoning, everything fell into place... In hindsight I wish I'd called the dog "intuitive" because psychologists who are still entrenched in the emotion-versus-cognition dichotomy often assume from the title that I'm saying that morality is always driven by emotion. Then they prove that cognition matters, and think they have found evidence against intuitionism. But intuitions (including emotional responses) are a kind of cognition. (Haidt 2012: 51-56; italics in original)

Indeed, Haidt employs the term "affect" (instead of "emotion") to refer to the feelings involved in moral judgment:

Affect refers to small flashes of positive or negative feeling that prepare us to approach or avoid something. Every emotion (such as happiness or disgust) includes an affective reaction, but most of our affective reactions are too fleeting to be called emotions (for example, the subtle feelings you get just from reading the words *happiness* and *disgust*)...

[A]ffective reactions are so tightly integrated with perception that we find ourselves liking or disliking something the instant we notice it, sometimes even before we know what it is. These flashes occur so rapidly that they precede all other thoughts about the thing we're looking at (Haidt 2012: 65).

On Haidt's model, feelings are involved but they are mere flashes, not emotions, which would require cognition. The important distinction then is not between emotion and cognition but between the unconscious and conscious processes.

Until recently, the dominant view on moral development did not place much importance on unconscious processing. This view was championed first by Jean Piaget (1965/1932) and developed by Lawrence Kohlberg (1969; 1971), which held that a child's moral behavior is best understood in terms of the child's articulations of moral principles.^[15] For Piaget and Kohlberg, reasoning follows the perception of an event. The reasoning then results in a judgment. Emotion may emerge from the judgment but is not causally related to it. On this theory, we reflect on specific principles in evaluating our moral choices and then deduce rationally a specific judgment. This "rationalist" model of moral development draws on data culled from the children's justifications. Research in recent decades has, however, called the Kohlbergian perspective into question, especially in its emphasis on justification over judgment.

Several challengers, picking up on a Humean sentimentalist theme, have risen to the fore, proposing in opposition a kind of moral sense or intuitionist theory. For instance, Haidt has observed that even fully mature adults are often unable to provide any

sufficient justification for strongly felt moral intuitions, a phenomenon he calls “moral dumbfounding” (Haidt 2001). Even more, people regularly engage in outright confabulation; they invent and confidently tell stories to explain their behavior (Haidt 2007). Moral dumbfounding and confabulation, however, are easily explained by a dual process theory, in which the perception of an event or action triggers an unconscious, automatic response, which immediately causes a moral judgment. On Haidt’s social intuitionist model, reasoning and justification come afterwards in the form of post hoc rationalizations of an intuitively generated response (Haidt and Bjorklund 2008).

Others have proposed alternative models. In a view recently championed by Antonio Damasio based on research on neurologically impaired patients (Damasio 1994; Tranel, Bechara, and Damasio 2000) and by Joshua Greene based on neuroimaging research (Greene 2008; Greene, et. al., 2004), our moral judgments are a blend of unconscious emotional responses and some form of principled and deliberate reasoning, which both precede and generate the judgment. Shaun Nichols has proposed a naturalized sentimentalism in which emotions do make vital contributions to moral judgment (Nichols 2004). These are but a few of the several, viable options currently under consideration in contemporary moral psychology.

Well before the research of behavioral economists, psychologists, neuroscientists, and other academics on hot vs. cold cognition and dual-system intuitive vs. deliberate mental processing, Wang Yangming had already advocated a deep respect for the automatic, unconscious judgments governing moral behavior (Tien forthcoming). Wang and many other Neo-Confucian thinkers have long appreciated the primacy and the

power of our intuitive mental processing, which has only recently gained prominence in the research agendas of analytic philosophy.^[16] Wang understood that unconscious, automatic beliefs immediately and directly affect our emotional states and behavior.

However, Wang's views also provide an instructive counterpoint to Haidt's position, which seems to undervalue conscious reasoning and overvalue the role of automatic processes. Wang advocates conscious, deliberate practice for shaping, cultivating, and training our unconscious intuitions and automatic thoughts.^[17] Wang was much more optimistic than Haidt seems in regards to the effectiveness of conscious cultivation of one's unconscious intuitions and automatic thoughts. Not just Wang's philosophy but the whole enterprise of Neo-Confucian self-cultivation is based on the belief that — adapting Haidt's analogy — the elephant trainer/rider is capable of taming the wild elephant through conscious, deliberate practice. While Wang and the Neo-Confucians believe it possible to train the unconscious, none held that it is an easy task. It requires arduous application over the long-term.

In many ways, Wang's views bear even more significant commonalities with modern cognitive-behavioral therapy, which is also based on the existence, prevalence, and power of automatic thoughts (Tien forthcoming). In Wang's moral psychology, our unconscious automatic thoughts have immediate effect on our emotional states, and when those unconscious thoughts conflict with what we consciously or explicitly think we ought to do, they undermine our abilities to carry out correct action.

Wang Yangming views our emotional states as being immediately affected by our “automatic thoughts”—which can be so brief, frequent, and habitual that they often are not “heard” or “caught.” Wang also maintains that we can make such automatic thoughts conscious—if they are not conscious already—and that we are able to evaluate, alter, reframe, or replace them. Furthermore, Wang holds that our automatic thoughts directly effect behavioral change and that behavioral change can also directly effect change of automatic thoughts. Wang teachings aimed to enable his students to train their thoughts and emotions and guide them in becoming better moral persons (Tien forthcoming).

Seen in this way, Wang’s method of self-cultivation is a kind of moral therapy.

Becoming more skilled at casting out and eradicating erroneous, unconscious, self-centered thoughts (私慾 *siyu*); at using the intuitive mind to perceive the correct *li* in morally relevant situations (事 *shi*); and at rectifying (格 *ge*) one’s thoughts (意 *yi*) so that they match up accurately with what is morally required in the situation (*shi*) requires that one constantly monitor one’s unconscious, automatic thoughts like a “cat catching mice” (Tien forthcoming).

Both the philosophy of Wang Yangming and cognitive-behavioral therapy uphold the power of unconscious, automatic thoughts to affect our emotional states. They both advocate a process of catching and identifying our dysfunctional unconscious thoughts and then evaluating, altering, or replacing them with better thoughts that are more effective for achieving the desired emotions and behaviors. Most importantly for Wang, they both share the conviction that behavioral change directly leads to mental and

emotional change, and vice versa. Comparing cognitive-behavioral therapy with Wang's moral psychology brings to light the importance of unconscious thoughts in Neo-Confucian moral self-cultivation. Wang and other historical Chinese philosophers held a deep appreciation for the dominating effect of our unconscious thoughts on our feelings and behavior (Tien forthcoming). Thus, in clinical psychology and in the philosophy of Wang Yangming, unconscious automatic thoughts and feelings are the primary basis of moral judgment and behavior.

IV. Training Unconscious Intuitions

Some philosophers may despair upon learning about the dual process theory of human judgment. If our decisions and behavior are actually driven by unconscious, automatic, intuitive responses instead of by conscious, rational deliberation or calculation, then what role is there for the activity of philosophizing? Indeed, in many places, Haidt has highlighted the "rationalist's delusion" that reason plays much of a role in guiding morality or solving moral issues: "From Plato through Kant and Kohlberg, many rationalists have asserted that the ability to reason well about ethical issues *causes* good behavior. They believe that reasoning is the royal road to moral truth, and they believe that people who reason well are more likely to act morally" (Haidt 2012: 103). The view he rejects is that reason normally plays the role of offering good justifying reasons and that moral self-control, self-cultivation, and socio-moral policy is exercised on the basis of such reasons (Flanagan 2014: 90).

In his *Righteous Mind*, Haidt cites research on Affective Priming, the Mere Exposure Effect, the Implicit Association Test, Todorov's work on our snap judgments of

likability and attractiveness, priming disgust and purity, the Confirmation Bias, Schwitzgebel's research on the moral behavior of ethics professors, and even hypnosis (Haidt 2012: 62-103). But that is just a small sample of the work on cognitive bias.

Other cognitive biases or non-rational psychological processes for which extensive evidence exists include the Association or Halo Effect, the Priming Effect, the Pygmalion Effect, Excitation Transfer, Hot-Cold Empathy Gap, Recency Effects, Peak Effects, Anchoring Errors, Choice Overload, the Ambiguity Effect, Confirmation Bias, the Impact or Durability Bias, Framing, Loss Aversion, Zero Price Effect, Hyperbolic Discounting, Scarcity Effects, Cost-Worth Signaling, Formal Authority, Reciprocity, Implementation Intentions, Social Proof, Positive Self-Identification, Self-Serving Bias, Over-Optimism Bias, Defensive Attribution, False Consensus Effect, Fundamental Attribution Error, and Status Quo Bias.^[18] All of these examples highlight both the power and ubiquity of unconscious belief and the relative impotence of conscious, rational reasoning in affecting behavior.

Can reason, then, sometimes play the role that millennia of Western philosophy say it does — of guiding and controlling moral behavior of oneself and others?

The philosophy of Wang Yangming, and much of Chinese philosophy, provides an excellent counterpoint to dominant Western approaches in the past and present. Wang's moral psychology focuses on the automatic, unconscious, intuitive processes in moral reasoning. His view offers a compelling account of how our moral judgments result not from a series of conscious calculations but from an innate moral faculty that produces

intuitive responses to morally significant situations. While reason and conscious practice come into play in training our automatic thoughts, he focused on the honing of one's unconscious moral intuitions. Wang's theoretical and practical concerns are on learning and teaching how to cultivate one's moral thought processes so as to affect moral behavior effectively. Wang emphasized how pernicious our cognitive blind spots are in obscuring clear moral judgment and action. He enjoins his students to be as vigilant in rooting out and eradicating cognitive errors, including emotions (because he did not suffer from the fallacious reason-emotion dichotomy), as a "cat catching mice — with eyes intently watching and ears intently listening" (Tien forthcoming).

Modern studies of the philosophy of Wang Yangming have pointed out how much Wang emphasized a *therapeutic* approach in his teachings over a purely *theoretical* one (Ivanhoe 2002: 85), and how structurally similar Wang's approach is to cognitive-behavioral therapy (Tien forthcoming). If contemporary philosophers were to embrace a more therapeutic approach like Wang's, there would be a clear place for reason in the conscious cultivation and training of the unconscious, or to use Haidt's analogy, for the rider to train the elephant, albeit in calm and controlled conditions.^[19]

If moral philosophers are concerned not only that their work make a difference in the real world, but also that their work track truth, that all the hard reasoning they do leads to the truth, then they should reconsider the rationalist method. If the dual process theory is correct, even if philosophers are more skilled and experienced than most people at reasoning, calm reflection by professional philosophers should bring to mind multiple cases in which another philosopher was clearly motivated to reach a

predetermined conclusion and was clever in rationalizing reasons to support the conclusion. Further reflection would reveal the hypocrisy in assuming that only other philosophers do this, not oneself (Haidt and Bjorklund 2008). The practice of moral philosophy — and indeed of all theoretical work in the academy — would benefit from a deeper respect for the biases involved in moral reasoning and judgment.

If the scope of “philosophy” could be widened, however, to encompass the thousands of years of Asian philosophical tradition, there could be hope for the rider on top of that unruly elephant. In his *Happiness Hypothesis*, Haidt is quite clear in stating that there are empirically verified methods that the conscious mind is able to use to “train” one’s unconscious, automatic responses. He focused on three proven methods for training the mind in particular (in this case, for happiness) — meditation, cognitive-behavioral therapy, and raising serotonin levels through SSRI’s (Haidt 2006). The first two methods have already been examined in this essay and the third in a footnote. I have also examined evidence for the efficacy of cognitive-behavioral therapy and its relationship to Wang’s thought, and to philosophy in general, in Tien (forthcoming). As I show, Wang strongly believes that his version of Neo-Confucian “cognitive-behavioral therapy” would have an average positive effect on the moral behavior and character of those who are exposed to his system of moral cultivation.^[20]

But, some might argue, meditation and cognitive-behavioral therapy (and experimenting with drugs) are not within the normal purview of philosophy. Well, they may not be so in modern Western academic philosophy, but the millennia of Chinese philosophers did not so severely restrict the scope of their work in this way. And if

modern philosophy became a little more flexible, it would not only become more interesting, it'd also become more relevant and more influential to more people.

One further role for reason not yet considered in this paper is reason's role in the shared traditions in which social norms are embedded. P.J. Ivanhoe rightly points out that traditional practices shape and inform our thinking and represent the results of a long history of careful reasoning. He argues that social norms in general embody traditions of reasoning about how to behave, and that many thinkers have internalized these in the course of growing up (Ivanhoe 2015). On his view, the reason vs. emotion dichotomy is too simplistic because it neglects the historical context and situatedness of our thinking. Being creators and champions of scholarly tradition, Confucian and Neo-Confucian scholars would undoubtedly concur, though Wang was often perceived as an iconoclastic thinker who believed more strongly than most that the mind ought to operate independently of tradition.

However, even in Wang's philosophy, Ivanhoe maintains that the central role of tradition comes into play. He contends that while some aspects of *liangzhi* can be found in innate dispositions, the kind of guidance and control Wang attributes to the *liangzhi* cannot be based exclusively or even primarily on these innate reactive attitudes. Ivanhoe astutely draws attention to the social context of his main audience: well-educated young men who already are concerned about their moral lives. From this, he infers that they have learned most of what they need to know about what to do and what not to do.^[21] Clearly, Ivanhoe is right that the background assumption in Neo-Confucian teachings is of a shared body of knowledge and expertise in the traditional

Chinese classics, the canons of Confucianism, Buddhism, Daoism, and the poetry and literature of their time. Wang assumed that his audience and students would be well versed in the Chinese classics and literature of his time.

But what about this idea applied to the modern context? What if we don't have the deep background knowledge or shared assumptions that Wang and his students would have had? Perhaps an equivalent in the modern world might be something like the Great Books survey courses at universities or a common core curriculum. Maybe more widely spread might be the moral values of earlier generations passed down through daily recitation in schools of the Pledge of Allegiance or such general "feel good" adages like the Golden Rule, "Treat others how you'd like to be treated." To the average young Westerner — who would not be college educated and probably has not worked his way through the canon of Shakespeare or even the Christian Bible — his set of social norms are more likely to come from Oprah, Jay-Z, the Kardashians, Taylor Swift, Jack Ma, or whoever is dominant on the latest social media platforms. I think it safe to say that the moral norms of modern people have become far less informed by the reasoning of historical traditions than were Wang Yangming's literati students.

No matter what one's generation, though, one will most certainly come to adopt and contribute to the shared background assumptions of one's peers, parents, siblings, and teachers — those people with whom one spends the most time. And this observation leads to another cognitive effect that is surprisingly pervasive, as it too works on an unconscious level — The Peer Group Effect, or as Nicholas Christakis refers to it, the "Network Effect" (Christakis and Fowler 2011).^[22] We tend to think and behave like our

peers. Extensive evidence has documented this in the widower effect, which is an old observation in the social sciences going back a century and a half. When one's spouse suddenly dies, one's chances of dying in the following year double. But even more surprising, this effect can be traced to at least a few more degrees of separation, such that if your friend's spouse dies suddenly, your daughter's friend may also become affected and her chances of becoming clinically depressed increase. The effect is also evident in obesity. If one's friend is obese, one's chances of being obese increase by fifty-seven percent. This effect too is visible as far downstream as three degrees of separation: if your friend's friend's friend is obese, your chances of being obese are ten percent higher. Evidence also exists for the Peer Group Effect in one's tastes, health, wealth, and happiness. And one of the key mechanisms for this influence is the spread from person to person of norms that become shared mostly as background assumptions.^[23] It's not that people go about their lives debating, reasoning, or arguing logically with their peers about their views on widowhood, obesity, divorce, gay marriage, or happiness. That's what college life is for, and most people in the world are not college-educated, and even among those who are, it is an open question how many of them engage in critical reasoning with their peers once they graduate. Rather, the Peer Group Effect is largely, but not exclusively, unconscious.

Beliefs, norms, and standards spread and become shared by our network of peers, family, and those with whom we spend a lot of time. These ideas get passed down to us not through logical reasoning or explicit teaching but as background beliefs, norms, and standards. And we pass them on as shared background assumptions. They form, shape,

guide, and constrain our thinking and reasoning. But they operate mainly as assumptions, and as such, they largely go unnoticed and hence unquestioned. If pressed, we may assent to them consciously, but these norms function mostly as unconscious assumptions.

When these shared background assumptions — whether they originated from peers or were passed down in historical traditions — become themselves the subject of debate, often the result is first knee-jerk resistance, then a great deal of struggle as new paradigms question the old assumptions, attempt to move beyond the traditional paradigms and change the rules of the game and the “map” directing new lines of thought. This happens when the mostly unconscious norms, standards, and background assumptions of tradition are highlighted and challenged.^[24]

V. Conclusions

To recapitulate, in this essay, I made four points. First, I summarized the argument that the experience of oneness, and not empathy, can be the primary motivator of helping behavior, and that this direct process from oneness to helping behavior undercuts the empathy-altruism pathway. Second, I examined research showing that the sense of oneness is directly correlated with decreased blood flow in the right parietal lobe and explored some implications of this relationship between the physical brain and moral motivation on philosophy. Third, I highlighted how much of our moral behavior is based on unconscious judgments, uncovered some facets of the false dichotomy between cognition and emotion, and explained how cognitive-behavioral therapy and Wang Yangminig’s moral psychology are focused on analyzing one’s unconscious

automatic thoughts. Finally, I surveyed the options for salvaging a role for reason and assessed whether and how it is possible to train our unconscious, automatic responses. Along the way at each point, I called attention to how Wang Yangming addressed similar questions in his views on oneness, self-centeredness, moral metaphysics, automatic thoughts, and the implications of prioritizing the therapeutic over the purely theoretical for the practice of philosophy.

ENDNOTES

^[1] While I argue more fully for this point elsewhere (Tien 2012), the space is insufficient to do so in this essay.

^[2] For a more detailed treatment of each of these points in the philosophy of Wang Yangming, see Tien forthcoming, Tien 2012, Tien 2010, and Tien 2004.

^[3] This section draws extensively on Tien 2012.

^[4] See especially Batson 1991. For his most recent study, see Batson 2009, 3-15. On empathy and moral motivation, see also Hoffman 2000. For a superb treatment of empathy in Neo-Confucian thought, see Angle 2009.

^[5] Cf., Dovidio, Allen, and Schroeder 1990.

^[6] This debate unfolds in Cialdini, et al., 1997; Batson et, al., 1997; Neuberg, et. al., 1997; Batson 1997. Cialdini continues in Cialdini 2016.

¹²¹ Cialdini et al., 1997, 485. Notice the shift in wording between “oneness” and “relationship closeness,” a point Batson picks up in his critique in 1997, 518-519.

¹²¹ Wang 1963, S. 179. Cf., *Mengzi* 7A: 15.

¹²¹ For an extensive treatment of the difference between *siyu* as “self-centeredness” vs. “selfishness,” see Tien 2012.

¹²¹ For a more detailed argument for taking *si* to mean “self-centeredness” rather than “selfishness,” see Tien 2012.

¹²¹ Also see Pfaff 2007 for a view in which the feeling of oneness with others is the result of turning off certain resources in the brain that are needed to maintain a strong sense of oneself as an individual. Maintaining a strong sense of the self psychologically requires more energy than the sense of oneness with others. Credit is due P.J. Ivanhoe for this initial reference.

¹²¹ As another example of how changes in neural activity can directly affect moral behavior, experimental research by Crockett et al. (2008) has shown that lowering serotonin levels increased retaliation to perceived unfairness without affecting mood, fairness judgments, basic reward processing or response inhibition.

¹²¹ For the sun behind clouds imagery, see Wang 1963 S. 21, 62, 76, 167, 171. For the mirror under dust imagery, see Wang 1963 S. 207, 237, 255, 289, 290.

¹¹⁴ An important account of the dual process theory can be found in Kahneman 2012.

Many prominent variations of this theory differ in important ways. A full listing of the various views is well beyond the scope of this paper.

¹¹⁵ The narrative of this summary is informed by Hauser, Young, and Cushman (2008); and Haidt and Bjorklund (2008).

¹¹⁶ See Sinnott-Armstrong (2008) for an excellent example of contemporary philosophical work in this area.

¹¹⁷ Thanks are due Hagop Sarkissian for this observation.

¹¹⁸ Rather than list the extensive research on each one, I refer the reader to a textbook surveying all listed plus more: Hewstone, Stroebe, and Jonas 2012.

¹¹⁹ Some notable works that have already made headway along such lines include Hadot 1995; Solomon 1999.

¹²⁰ Thanks to Eric Schwitzgebel for pushing me to be clearer on this point.

¹²¹ Drawn from private correspondence with P.J. Ivanhoe in comments to an earlier draft of this essay.

¹²² This usage is not to be confused with the “network effects” in the tech world.

¹²³ This research is summarized in Christakis and Fowler 2011.

¹²⁴¹ Thomas Kuhn's *Structure of Scientific Revolutions* is a classic statement of this view of intellectual progress. Kuhn (2012/1962).

REFERENCE LIST

Angle, Stephen C. (2009). *Sagehood: The Contemporary Significance of Neo-Confucian Philosophy*. New York: Oxford University Press

Ariely, Dan (2012b). *The Honest Truth about Dishonesty*. HarperCollins.

Ariely, Dan (2012a). *Predictably Irrational: The Hidden Forces That Shape Our Decisions*. First edition in 2008, HarperCollins

Ariely, Dan (2010). *The Upside of Irrationality: The Unexpected Benefits of Defying Logic at Work and at Home*. HarperCollins.

Aron, Arthur, and Elaine N. Aron. (1986). *Love and the Expansion of Self: Understanding Attraction and Satisfaction*. Washington, District of Columbia: Hemisphere Publishing Company

Aron, A., E. N. Aron, and D. Smollan. (1992). "Inclusion of Other in the Self Scale and the Structure of Interpersonal Closeness," *Journal of Personality and Social Psychology* 63: 596-612

Aron, A., and E. N. Aron, M. Tudor, and G. Nelson. (1991). "Close Relationships as Including Other in the Self," *Journal of Personality and Social Psychology* 60: 241-53

Batson, C.D. (2009). "These things called empathy: eight related but distinct phenomena," In J. Decety & W. Ickes (Eds.), *The Social Neuroscience of Empathy* (pp. 3–15). Cambridge: MIT press.

Batson, C.D. (1997). "Self-Other Merging and the Empathy-Altruism Hypothesis: Reply to Neuberg et al." *Journal of Personality and Social Psychology* 73: 517-22

Batson, C.D. (1991). *The Altruism Question: Toward a Social-Psychological Answer*. Hillsdale, NJ: Erlbaum

Batson, C. D., K. Sager, E. Garst, M. Kang, K. Rubchinsky, and K. Dawson. (1997). "Is Empathy-Induced Helping Due to Self-Other Merging?" *Journal of Personality and Social Psychology* 73: 495-509.

Benton, A. L., Sivan, A. B., Hamsher, K. De S., Varney, N. R., & Spreen, O. (1983). *Contribution to Neuropsychological Assessment*. New York, NY: Oxford University Press

Blanke, O., and Arzy, S. (2005). "The out-of-body experience: Disturbed self-processing at the temporo-parietal junction," *The Neuroscientist*, 11: 16–24.

Brewer, M. B., and W. Gardner. (1996). "Who is this 'We'? Levels of Collective Identity and Self Representations," *Journal of Personality and Social Psychology* 71: 83-93

Brefczynski-Lewis, J.A., et. al., (2007). "Neural correlates of attentional expertise in long-term meditation practitioners," *Proceedings of National Academy of Sciences USA*, 104: 11483-11488.

Brozgold A.Z., Borod J.C., Martin C.C., Pick L.H., Alpert M., Welkowitz J. (1998). "Social functioning and facial emotional expression in neurological and psychiatric disorders," *Applied Neuropsychology*. 5: 15–23.

Christakis N.A., and Fowler J.H. (2011). *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives — How Your Friends' Friends' Friends Affect Everything You Feel, Think, and Do*. Back Bay Books.

Cialdini, Robert B. (2016). *Pre-Suasion: A Revolutionary Way to Influence and Persuade*. New York, NY: Simon & Schuster.

Cialdini, Robert B. (1984). *Influence: The Psychology of Persuasion*. Harper.

Cialdini, R. B., S. L. Brown, B. P. Lewis, C. Luce, and S. L. Neuberg (1997). "Reinterpreting the Empathy-Altruism Relationship: When One into One Equals Oneness," *Journal of Personality and Social Psychology* 73: 481-94

Crockett M.J., Clark L., Tabibnia G., Lieberman M.D., Robbins T.W. (2008). "Serotonin modulates behavioral reactions to unfairness," *Science*, 320: 1739–1739

Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Putnam/Boston: Norton

Davis, M. H., L. Conklin, A. Smith, and C. Luce. (1996). "The Effect of Perspective Taking on the Cognitive Representation of Persons: A Merging of Self and Other," *Journal of Personality and Social Psychology* 70: 713-26.

Decety, J., and Moriguchi, Y. (2007). "The empathic brain and its dysfunction in psychiatric populations: implications for intervention across different clinical conditions," *Biopsychosocial Medicine*, 1: 1-22

Decety, J., and Sommerville, J. A. (2003). "Shared representations between self and others: A social cognitive neuroscience view," *Trends in Cognitive Sciences*, 7: 527-533.

Dovidio, J.F., Allen, J.L., Schroeder, D.A. "Specificity of empathy-induced helping: Evidence for altruistic motivation." *Journal of Personality and Social Psychology*, (1990) 59: 249-260.

Feinberg T. E., Keenan J. P. (2005). "Where in the brain is the self?" *Consciousness and Cognition*, 14: 661-678.

Flanagan, O. (2014). *Moral Sprouts and Natural Teleology: 21st century Moral Psychology Meets Classical Chinese Philosophy*. Marquette University Press.

Greene, J. (2008). "The secret joke of Kant's soul." In W. Sinnott-Armstrong (Ed.), *Moral psychology, volume 3. The Neuroscience of morality: Emotion, brain disorders, and development* (pp. 35-80). Cambridge: MIT Press.

Greene, J.D., Nystrom, L.E., Engell, A.D., Darley, J.M., & Cohen, J.D. (2004). "The neural bases of cognitive conflict and control in moral judgment." *Neuron*, 44: 389-400.

Hadot, P. (1995). *Philosophy as a Way of Life: Spiritual Exercises from Socrates to Foucault*. Wiley-Blackwell.

Haidt, J. (2012). *The righteous mind: Why good people are divided by politics and religion*. New York: Pantheon.

Haidt, J. (2006). *The happiness hypothesis: Finding modern truth in ancient wisdom*. New York: Basic Books

Haidt, J. (2001). "The emotional dog and its rational tail: A social intuitionist approach to moral judgment," *Psychological Review*. 108: 814-834

Haidt, J., and Bjorklund, F. (2008). "Social intuitionists answer six questions about moral psychology." In W. Sinnott-Armstrong (Ed.), *Moral psychology, volume 2. The cognitive science of morality: Intuition and diversity* (pp. 181-218). Cambridge: MIT Press.

Hauser, M.D., Young, L., & Cushman, F. (2008a). "Reviving Rawls's linguistic analogy: Operative principles and the causal structure of moral actions." In W. Sinnott-

Armstrong (Ed.), *Moral psychology, volume 2. The cognitive science of morality: Intuition and diversity* (pp. 107-144). Cambridge: MIT Press.

Hewstone M., Stoebe W., and Jonas K. (2012). *An Introduction to Social Psychology*, 5th Edition. BPS Blackwell.

Hoffman, M.L. (2000). *Empathy and moral development: Implications for caring and justice*. New York: Cambridge University Press.

Hogg, Michael A. (1992). *The Social Psychology of Group Cohesiveness: From Attraction to Social Identity*. London: Harvester Wheatsheaf.

Ivanhoe, Philip J. (2015). "Wagging Tails and Riding Elephants: Why Study Non-Western Philosophy?" mss.

Ivanhoe, Philip J. (2002). *Ethics in the Confucian Tradition: The Thought of Mengzi and Wang Yangming*, 2nd edition. Indianapolis, Indianapolis: Hackett Publishing Co., Inc.

Johnstone, B., et. al., (2012). "Right Parietal Lobe-Related "Selflessness" as the Neuropsychological Basis of Spiritual Transcendence," *The International Journal for the Psychology of Religion*, 22.4: 267-284.

Johnstone, B., et al. (2012). "The soft X-ray light curves of partially eclipsed stellar flares," *Monthly Notices of the Royal Astronomical Society*, 419.1: 29-38.

Johnstone, B. & Glass, B.A. (2008). "Support for a Neuropsychological Model of Spirituality in Persons with Traumatic Brain Injury," *Zygon* 43.4: 861-874.

Kahneman, Daniel (2013). *Thinking Fast and Slow*. Farrar, Straus and Giroux.

Kass J.D., Friedman R., Leserman J., Zuttermeister P.C., Benson H. (1991). "Health outcomes and a new index of spiritual experience," *Journal for the Scientific Study of Religion*. 30: 203–211.

Kohlberg, L. (1971). "From is to ought: How to commit the naturalistic fallacy and get away with it in the study of moral development." In T. Mischel (Ed.), *Cognitive development and epistemology* (pp. 151-235). New York: Academic Press.

Kohlberg, L. (1969). "Stage and sequence: The cognitive-development approach to socialization." In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 347-380). Chicago: Rand McNally.

Khun, Thomas. (2012/1962). *The Structure of Scientific Revolutions*, first edition 1962. Chicago, IL: University of Chicago Press.

Lou, Hans C., Luber, Bruce; Crupain, Michael; Keenan, Julian P.; Nowak, Markus; Kjaer, Troels W.; Sackeim, Harold A.; and Lisanby, Sarah H. (2004). "Parietal cortex and representation of the mental Self," *Proceedings of the National Academy of Sciences*, 101.17: 6827–32.

Mesulam, M.-Marsel. (2000). *Principles of Behavioral and Cognitive Neurology, Second Edition*. New York, NY: Oxford University Press.

McGlynn, Susan, and Schacter, Daniel L. (1989). "Unawareness of Deficits in Neuropsychological Syndromes," *Journal of Clinical and Experimental Neuropsychology*, 11.2: 143-205.

Neuberg, S.L., R. B. Cialdini, S. L. Brown, C. Luce, and B. J. Sagarin. (1997). "Does Empathy Lead to Anything More Than Superficial Helping? Comment on Batson, et al." *Journal of Personality and Social Psychology* 73: 510-6

Newberg A. B. (2010). *Principles of Neurotheology*. Surrey, UK: Ashgate Publishing Ltd.

Newberg A., Pourdehnad M., Alavi A, d'Aquili E. (2003). "Cerebral blood flow during meditative prayer: preliminary findings and methodological issues," *Perceptual and Motor Skills Journal*, 97: 625–630.

Newberg A. B., Alavi A., Baime M., Pourdehnad M., Santanna J, and d'Aquili E. G. (2001). "The measurement of regional cerebral blood flow during the complex cognitive task of meditation: a preliminary SPECT study," *Psychiatry Research: Neuroimaging*. 106: 113–122.

Nichols, S. (2004). *Sentimental rules: On the natural foundations of moral judgment*. New York: Oxford University Press

Nisbett, Richard, and Wilson, Timothy. (1977). "Telling more than we can know: Verbal reports on mental processes," *Psychological Review*, 84, 231-259.

Piaget, J. (1965). *The moral judgment of the child* (M. Gabain, Trans.). New York: The Free Press. (Originally published in 1932 by London: Kegan Paul, Trench, Trubner, and Co.)

Pfaff, Donald (2007). *The Neuroscience of Fairplay: Why We (Usually) Follow the Golden Rule*. Dana Press.

Platek S.M., Thomson J.W., and Gallup G.G. Jr.. (2004). "Cross-modal self-recognition: the role of visual, auditory, and olfactory primes," *Conscious and Cognition* 13.1: 197-210

Sinnott-Armstrong, W. (Ed.) (2008). *Moral psychology, volume 2. The cognitive science of morality: Intuition and diversity*. Cambridge: MIT Press

Solomon, R.C. (2003). *The Joy of Philosophy: Thinking Thin versus the Passionate Life*. New York, NY: Oxford University Press.

Thaler, Richard H. (2009). *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New Haven, CT: Yale University Press.

Tien, David W. (Forthcoming). "Wang Yangming's Moral Psychology and Cognitive-Behavioral Therapy." In Justin Tiwald, Ed. *The Oxford Handbook of Chinese Philosophy*. New York, NY: Oxford University Press.

Tien, David W. (2012). "Oneness and Self-Centeredness in the Moral Psychology of Wang Yangming." *Journal of Religious Ethics* 40.1: 52-71.

Tien, David W. (2010). "Metaphysics and the Basis of Morality in the Philosophy of Wang Yangming." In John Makeham, ed., *Dao Companion to Neo-Confucian Philosophy*. Springer. Pp. 295–314.

Tien, David W. (2004). "Warranted Neo-Confucian Belief: Knowledge and the Affections in the Religious Epistemologies of Wang Yangming (1472–1529) and Alvin Plantinga," *International Journal for Philosophy of Religion*. 55(1): 31–55.

Tranel, D., Bechara, A. & Damasio, A. (2000). "Decision making and the somatic marker hypothesis." In M. Gazzaniga (Ed.), *The new cognitive neurosciences* (pp. 1047-1061). Cambridge: MIT Press.

Uddin L.Q., Molnar-Szakacs I., Zaidel E., Iacoboni M. (2006). "rTMS to the right inferior parietal lobule disrupts self-other discrimination," *Social Cognitive and Affective Neuroscience*, 1.1: 65-71.

Uddin L.Q., Kaplan J.T., Molnar-Szakacs I., Zaidel E., and Iacoboni M. (2005). "Self-face recognition activates a frontoparietal 'mirror' network in the right hemisphere: an event-related fMRI study," *Neuroimage* 25.3: 926-35.

Urgesi, C., et al. (2010). "The Spiritual Brain: Selective Cortical Lesions Modulate Human Self-Transcendence," *Neuron* 65: 309-319.

Wang Yangming. (1963). *Instructions for Practical Living and Other Neo-Confucian Writings* by Wang Yangming. Based on Wang Wenchenggong *Quanshu* edition of 1572. Translated with notes by Wing-tsit Chan. New York, New York: Columbia University Press