

Mysteries of Hypnosis and the Self Are Revealed by the Psychology and Neuroscience of Empathy

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This article reviews a growing body of research and theory in hypnosis and neuroscience that supports the empathic involvement theory (EIT) of hypnosis (Wickramasekera II, 2001; Wickramasekera II & Szlyk, 2003; Wickramasekera II, 2007c). The EIT is a unified transpersonal theory of hypnosis and the self, which weaves together empathic elements of Dzogchen, neodissociative, neuroscience, psychoanalytic, sociocognitive, and other theories by proposing that hypnotic phenomena are inherently characterized by their deep involvement with processes of empathy and the self. The EIT proposes that the experience of hypnosis is embodied in a system of neural networks in the brain that utilizes empathy-related processes, adaptive resonance between perceptual input and top-down expectancies, and connectionist learning algorithms to (a) empathically enact the affect, cognition, body language, response expectancies, social roles, sensations, etc. that are presented to them during hypnosis in accordance with socio-cognitive theories of hypnosis; (b) engage in a convergent psychophysiological relationship with another person in accordance with psychoanalytic, Ericksonian, and polyvagal/social engagement system theories; (c) alter the empathic self/other (theory of mind) coding of phenomenological experiences during hypnosis in accordance with aspects of the neo-dissociative and socio-cognitive traditions; and (d) develop an experiential understanding of the illusion of self that may lead, in some people, to its transcendence in accordance with Bon-Buddhist, Dzogchen, and transpersonal scholars. A unified definition of hypnosis is proposed based on findings in the empathic neuroscience of hypnosis as well as a working model of the neuromatrix of the self.

Keywords: consciousness, Dzogchen, empathy, hypnosis, neuroscience, self

Introduction: The Mysteries of Hypnosis and the Self

Researchers around the world have struggled for over 200 years to resolve a seemingly intractable debate about whether the nature of hypnosis (Forrest, 1999; Kirsch & Lynn, 1995; Pekala & Kumar, 2005) is primarily a social psychological related phenomenon or rather a special state of consciousness based on advanced mind/body and/or neuropsychological talents. This debate started from the earliest of times in the history of hypnosis (Bernheim, 1891; Faria, 1819) and has been particularly vexing to resolve

due to the impressive amount of evidence that each theoretical camp has produced. For instance, there are a number of impressive studies that seem to indicate that the effects of the hypnotic state can be reliably measured phenomenologically (Pekala & Kumar, 2000, 2005; Sheehan, 1992) and even indexed psychophysically (Barabasz & Barabasz, 2008; McGeown, Mazzoni, Venneri, & Kirsch, 2009). Meanwhile, a separate tradition of research has produced an equally impressive amount of evidence that indicates how expectation, context, and other social psychological factors influence hypnotic subjects to genuinely enact the role of being hypnotized as a kind of *believed-in imagining* (Kirsch & Lynn, 1995; Kirsch, Mazzoni, & Montgomery, 2007; Sarbin, 1950, 1998). Any theory of hypnosis that wishes to resolve its central mysteries must at least account for and integrate these two strong traditions of hypnosis in some way (Pekala & Kumar, 2005).

Meanwhile, questions regarding the true nature of the self that human beings seem to inherently experience has been debated in folklore, philosophy, religion, science, and various traditions of wisdom for millennia (Wickramasekera II, 2014). There is evidence from the earliest times in civilization that our ancestors struggled with questions about whether the sense of identity or self that we experience was singular or plural in nature, eternal or transitory, or perhaps a mere illusion or a distortion of our true nature (Wickramasekera II, 2014). For example, many mystical traditions that practice techniques of meditation, such as mindfulness and Dzogchen, have asserted that the self is very illusory in nature (Wangyal, 2011) and that techniques of meditation can help one to experience the true nature of our mind. Questions about whether the nature of human identity was singular or plural were also immediately present in the early history of hypnosis when researchers discovered that some of their hypnotic subjects appeared to evidence other parts of themselves or *ego states* that could be contacted during hypnotic experiments and psychotherapy (Faria, 1819; Hilgard, 1977; Watkins & Watkins, 1997). More recently, participants in studies conducted by Amanda Barnier and her colleagues (Barnier, Cox, Connors, Langdon, & Coltheart, 2010; Cox & Barnier, 2010, 2013) have shown that people experiencing hypnosis can even have the ability to convincingly transform their identity into that of another person to such a degree that they no longer demonstrate signs of self-recognition when shown the image of their face in a mirror.

I wish to explore a theory in this article in which I assert that these mysteries of hypnosis and the self can be explained by a close examination of how empathy and its embodiment in the mind and brain influence them both. Overall, I have termed my theory the *empathic involvement theory* (EIT: Wickramasekera II & Szlyk, 2003; Wickramasekera II, 2007b, 2007c) for its characterization of the ubiquitous way in which empathy is involved with hypnotic phenomena and the creation and maintenance of the self. The EIT defines hypnosis as an experience of enhanced empathy and phenomenological alteration with the self in which a hypnotic subject utilizes

perspective taking, empathic concern, and empathic aspects of theory of mind (TOM) to experience alterations in affect, behavior, consciousness, sensation, thoughts, and mind/body relationship that are suggested to him/her by a hypnotist and/or through his/her own creative and imaginative directions. This definition of hypnosis asserts that hypnosis is a consequence of the empathic nature of human beings and the processes of self/other that underlie how we experience the world. This article will examine the evidence and theory behind the EIT beginning with the life experiences that first led me to develop this theory, and will commence with an examination of how the EIT can bridge the gap between the social cognitive and special state theories of hypnosis by grounding them both in the psychology and neuroscience of empathy. Along the way, the theoretical implications of the EIT will also be discussed for other theories of hypnosis, finishing with some glimpses at what might lie beyond the self.

Empathy and Hypnosis: Original Observations

I first developed the ideas in the Empathic Involvement Hypothesis about 15 years ago after my own chance observation that many people gifted with high hypnotic ability seemed to be very empathic (Wickramasekera II, 2001; Wickramasekera II & Szlyk, 2003). I have had the good fortune to be able to work with hundreds of high hypnotizables in clinical and experimental settings and have often been struck with how empathic they were in and outside of hypnosis. I was also fascinated with quite a number of experiences that I have had in psychotherapy in which hypnotic-like (Krippner, 2005) experiences of trance seemed to spontaneously emerge while I was utilizing techniques of therapeutic empathy through following the traditions of humanistic psychology (Rogers, 1957). I often find that it is possible for me to become so empathically entranced in a client's inner world that we both lose track of time in the session. Somehow the flow of time seems to have been altered and slowed in these moments by the empathic bond that we share. This experience of time alteration in deep empathic moments seems very related to experiences of *time distortion* that I have experienced in hypnosis (Cooper & Erickson, 2002; Pekala & Kumar, 2000).

These early experiences collectively suggested that there was something about empathy that was powerful enough to alter the experience of consciousness, as if empathy could create spontaneous hypnotic-like experiences by itself. It was at this time that I initially developed the EIT, which proposes the idea that hypnosis is an inherently empathy-laden experience and that high hypnotizables use their empathic talents to adapt to the perspective, expectations, imagery, emotions, and body language that their hypnotist presents to them using hypnotic induction procedures and hypnotic suggestions (Wickramasekera II, 2001). I later discovered that a number of theorists had previously proposed empathy-related ideas about hypnosis, which will now be briefly reviewed.

Empathy and Hypnosis: Socio-Cognitive Perspectives

Theodore Sarbin (1911–2005), who was one of the great founders of the socio-cognitive tradition of hypnosis, developed a theory that hypnotic phenomena were produced by the hypnotic subject's adoption of what he/she thought the role of a hypnotic subject should be (Sarbin, 1950). Sarbin's theory has sometimes been misinterpreted by some to mean that hypnosis is a faked behavior, while in actuality, Sarbin's intention was to describe the genuineness of the hypnotic role as a believed-in imagining (Sarbin, 1998). Sarbin (1956) touched upon the value of empathy in his theory when he noted that some people seemed to have greater accuracy in their role-taking aptitude than others, which also allowed them to experience hypnosis with greater intensity. Role-taking ability has been identified in social psychological research as one of the most important individual differences between people in their capacity for empathy and is more generally referred to as *perspective-taking* in the modern literature of social psychology (Davis, 1983, 1994).

I have previously hypothesized that processes of empathy may account for how hypnosis is affected by various social psychological interventions (Wickramasekera II, 2001, 2003, 2007c) designed to define the role of a hypnotic subject (Sarbin, 1950; Spanos, 1996) and/or the *response expectancies* of the person experiencing hypnosis (Kirsch & Council, 1989). For instance, a number of experiments have demonstrated that a person's prior expectation that he/she will be able to experience hypnotic phenomena is moderately to highly correlated with his/her subsequently measured hypnotic ability (Council, 1999). Another classic experiment by Glass and Barber (1961) demonstrated that it was even possible to induce an experience of hypnosis in subjects by merely administering a placebo pill to a person who had been previously led to expect that the pill could induce a hypnotic trance. In general, there is excellent evidence for the socio-cognitive assertion that people's roles, expectations, and attitudes tend to mediate the experiences that they have in hypnosis (Council, 1999).

However, other than Sarbin's (1956) discussion of role-taking ability, there has been very little theoretical development within the socio-cognitive tradition of an account for how these kinds of social roles and response expectancies are actually ascertained and adopted by hypnotic subjects. After all, there must be some psychological mechanism that allows hypnotic subjects to adopt these attitudes, cognitions, expectancies, and roles, or else they simply would not have any effect on people even on an unconscious, implicit, or automatic basis (Kirsch & Lynn, 1999). Furthermore, it has been similarly difficult to research how response expectancies and roles are adopted by the brain since there has been no real accounting of a hypothesized process that could explain how roles and expectancies are psychologically absorbed into human beings. Empathy may therefore be the missing link in explaining how socio-cognitive processes are mediated within a person. Processes of empathy may be required for participants to empathically enact and embody the expectations, roles, perspectives, imagery, emotions, somatic symptoms, and/or body language suggested to them through hypnotic

inductions, psycho-educational interventions prior to experiencing hypnosis, and a myriad of potential manipulations of the social psychological context in which the hypnotic relationship takes place (Wickramasekera II & Szlyk, 2003). This study now turns to an examination of the psychological research and findings in neuroscience that implicate empathy as a process that is deeply involved with hypnosis.

Psychological Research on Empathy and Hypnosis

There have been two studies that have examined the relationship between hypnotic ability and empathy directly (Wickramasekera II & Szlyk, 2003; Wickramasekera II & Ran, 2008). Both studies have essentially found modest significant correlations between hypnotic ability and empathy consistent with the predictions of the EIT. There have also been six studies of the relationship between *absorption*, a personality correlate of hypnotic ability, and empathy, which all demonstrate a moderate relationship between the tendency to enter into focused states of awareness (absorption) and to engage in empathic experiences (Rivers, Wickramasekera II, & Pekala, 2006; Wickramasekera II, 2007a; Wickramasekera II & Szlyk, 2003; Wickramasekera II & Ran, 2008). A related study by Cardeña, Terhune, Löff, and Buratti (2008) also found a relationship between automatic and implicit aspects of empathy (emotional contagion) and hypnosis. A recent study by Peter et al. (2015) found that high hypnotizables are more likely to report having an unselfish and self-sacrificing style, which the authors concluded is consistent with the EIT. Furthermore, a previous study conducted by Lynn et al. (1991) found that varying the amount of rapport (an empathy-like experience) that a hypnotist utilized had a positive effect on encouraging hypnotic behaviors and experiences. Overall, these studies collectively do seem to indicate that empathy is a trait that can be reliably found in high hypnotizables and that empathy is important for initiating a hypnotic relationship as predicted by the EIT. However, only a few of these studies controlled for context effects (Council, Kirsch, & Hafner, 1986), and many utilized a subject self-selection design that has demonstrated some potential confounds in previous hypnosis research (Barabasz & Barabasz, 1992). Meanwhile, a number of studies in medicine and neuroscience have been published that also seem to implicate that empathy and hypnosis are related.

The Empathic Neuroscience of Hypnosis

A number of experiments conducted by Elvira Lang and her colleagues (Lang et al., 2000, 2008) have demonstrated that utilizing empathy by itself (as well as with hypnosis) can help patients significantly reduce their experience of pain and suffering during invasive medical procedures. These findings seem to again raise the possibility that there is something entrancing about empathy that is capable of providing some analgesia and anxiolysis during an invasive medical procedure just through having a medical

professional engage in an empathic intervention with them. However, the hypnosis group in these experiments benefitted more in terms of analgesia, anxiolysis, and the rate of adverse effects than the empathic attention group. The additional benefit may be due to the specific hypnotic suggestions that they received in addition to the hypnotic-like relationship of therapeutic empathy.

There have been a number of studies linking the autonomic psychophysiology of empathy with hypnosis as well. Eve Banyai (1998) demonstrated that there is a tendency for participants in hypnotic relationships (i.e., the hypnotist and the hypnotic subject) to mirror each other's body language and autonomic psychophysiology as the hypnotic experience deepens. This kind of mirroring is evident in the overt body movements that each person makes, the body postures that they hold, and the synchrony between measures of their psychophysiology, such as respiration and electromyography (muscle tension). These studies essentially provided the first direct psychophysiological evidence of an automatic and implicit empathy-related process operating within the hypnotic relationship.

However, the idea that mirroring and imitation might contagiously spread from one person to another is something discussed in both the psychoanalytic understanding of transference and countertransference (Tansey & Burke, 1989) and the Ericksonian traditions of hypnosis (Rossi & Rossi, 2006). Freud (1922) speculated that the experience of countertransference might emerge as a genuine empathic experience from an analyst's attempt to formulate how his/her countertransference experience embodies the projective identification of his/her patient (Tansey & Burke, 1989). Freud's theory was essentially that we pick up on the projections of others through imitation and can then form an empathic model of their mind through mirroring them. Wickramasekera II and Ran (2008) were able to partially validate this idea by demonstrating that the strength of a person's transference response in hypnosis is moderately related to both their trait empathy and hypnotic ability. In this sense, the *trance of transference* may be due to the trance-inducing nature of strong empathic experiences, such as hypnosis and projective identification.

More recently, Stephen Porges (2011) independently proposed that this kind of unconscious tendency for people to come into a state of psychophysiological convergence with one another is a sign that the *social engagement system* of their body is empathically responding to the other person. The social engagement system of the body is described as an unconscious and automatic system that evaluates the emotions of others (empathy) and also engages in affective bonding and mirroring responses with them. Porges discovered that much of this response occurs in the body via the vagus nerve (Porges, 2011) and that cardiac vagal tone (heart rate variability) is a good index of the employment of this kind of unconscious engagement and psychophysiological synchrony with other people. Harris, Porges, Clemenson, and Vincenz (1993) were the first to discover that cardiac vagal tone is a reliable predictor of hypnotic ability. Subsequent research by Diamond, Davis, and Howe (2008) has even shown that cardiac vagal tone can be a

good predictor of the depth of the state of hypnosis as well as a predictor of hypnotic ability. Previous research also implicates the neurohormone oxytocin to both hypnosis and the social engagement system (Bryant, Hung, Guastella, & Mitchell, 2012; Porges, 2011), and oxytocin appears to play a similar role in calming and attuning the autonomic nervous system in both experiences. Collectively, these lines of research seem to demonstrate that the autonomic psychophysiology of empathically attuning to people is similar to the experience of hypnosis and is also predictive of being able to experience hypnosis.

The psychophysiological convergence between the hypnotist and the hypnotic subject discussed in Eve Banyai's (1998) research demonstrates the kind of *emotional contagion* effect that Cardeña and colleagues (2008) were able to correlate with hypnotic ability. The idea that emotional contagion, imitation, or the *chameleon effect* (Chartrand & Bargh, 1999) are related to hypnosis has long been discussed and written about, going back to Benjamin Franklin's observations of the séances of mesmerism (Forrest, 1999). Sigmund Freud (1922) and Clark Hull (1933) both remarked upon the nature of imitation in hypnosis, and Hull even attempted to invent a device to measure it. More recently, a number of researchers and theorists have speculated that the network of mirror neurons in the brain may underlie this relationship (Rossi & Rossi, 2006; Wickramasekera II, 2007b). Mirror neurons are a subtype of neurons that are hardwired to fire in response to the body language and emotion-related movements of others (Gallese, 2009). Mirror neurons appear to offer our brains a bottom-up oriented way of understanding other people's emotions through imitating/mirroring the neural firing patterns in our own brain networks that we observe in others. It is important to note that these neurons fire maximally in relationship to the movements of others and not in relationship to the body movements in which we ourselves are engaged. The mirror neuron network is thought to help us to implicitly and automatically understand how another person is feeling through forming a neural representation or *simulation* about what the observable body movements of others might mean physically and emotionally. For example, witnessing a person who is shivering, stamping their feet, and rubbing their hands might generally signal to us that they are cold and quite probably unhappy.

Empathy theorists have suggested that the brain might be running simulations all the time about the probable meaning of various body postures, facial expressions, etc. that we observe in others whether we realize it or not (Gallese, 2009). These simulations are thought to be run and stored for future reference in case we might encounter the same scenario again when interacting with other people. The learning, interpretation, and storage of these emotional simulations are thought to be accomplished by networks of our brain that are utilizing connectionist algorithms and neural network-like architecture (Grossberg, 2013). The mirror neurons form a bottom-up representation or simulation in the brain of what we are experiencing in another person. The simulation represents what we think another person is experiencing, and this input is then compared with previously stored simulations of emotions that we have encountered before with the same and other people (Gallese, 2009; Otti et al., 2010). This comparison process occurs

automatically and unconsciously in milliseconds so that we do not typically consciously experience it.

This process of matching bottom-up simulations from mirror neurons with previous representations and/or simulations of emotion are thought to be effectively learned and stored in a network of brain regions called the default-mode network (DMN; Buckner, Andrews-Hanna, & Schacter, 2008; Otte et al., 2010). The DMN is thought to be a critical network of the brain that helps embody empathy, although it more generally is thought to be involved with the inward experience of self, mentation, and day-dreaming. The two simulations receive an increasing amount of neurochemical *resonance* (Grossberg, 2013) between them when the DMN arrives at a good match between what the mirror neurons have encoded and a previously stored simulation of another person's emotional experience. A conscious experience of the other person's emotional state may then emerge as a result of this increasing neurochemical resonance between the bottom processing activity of the mirror neurons and the activated top-down simulation activity of the DMN. A critical level of resonance between the target simulation and the stored input is needed to trigger conscious empathic awareness of the other person's emotional and physical experience, and this appears to be a basic principle of perceptual processes (Grossberg, 2013).

A number of studies have tied activity in the DMN to the experience of hypnosis, which is consistent with the predictions of the EIT due to the empathic nature of the tasks that the DMN performs (Demertzi et al., 2011; McGeown et al., 2009). There are a number of brain areas involved in the DMN, including the cingulate cortex, medial temporal lobe, medial prefrontal cortex, and the hippocampus (Buckner et al., 2008). The DMN is thought to be the brain network that is most associated with internal and/or self-oriented neural processes. Activity in the DMN is anti-correlated with the activity of another brain network called the *extrinsic system*, which mediates the conscious experience of the external world and is involved in task-oriented activities (Demertzi et al., 2011; Vincent, Kahn, Snyder, Raichle, & Buckner, 2008). The activity of both the intrinsic (DMN) and extrinsic brain networks systems is thought to be regulated by the frontoparietal control system (FPCS), which may integrate the activity in both networks (Vincent et al., 2008). The task of the FPCS is to integrate the right balance of extrinsic and intrinsic processing needed at the moment for the individual. For example, most of us would drift into a period of heavy DMN activation if we were instructed to rest with our eyes closed as we naturally attended to our internal mentation and phenomenology. Meanwhile, the extrinsic system is engaged and the DMN diminished by the FPCS if we are asked to engage in a visual recognition task.

The anterior cingulate (AC) is a critical structure in the FPCS and DMN that has previously been shown to be active during many different types of hypnotic phenomena (Spiegel, White, & Waelde, 2010) that involve an integration of extrinsic and intrinsic brain processes, such as hypnotic analgesia. It may be that hypnosis utilizes the DMN to empathically enact the hypnotic suggestions presented to subjects while also utilizing

the FPCS to modulate the specific balance needed between the intrinsic and extrinsic brain systems. This may help explain why some studies have found a decrease in the DMN when hypnosis was utilized with eyes open and increases in DMN when hypnosis was employed with eyes closed (Demertzi et al., 2011; McGeown et al., 2009).

In summary, knowledge about the precise phenomenology of the embodiment of empathy and hypnosis can still be said to be at an early stage. However, it is relatively safe to say that the embodiment of hypnosis seems to involve a lot of psychophysiological processes that implicate empathy in the autonomic nervous system, brain, and neurohormone networks. I propose that the experience of hypnosis is accomplished through an empathic neural network that utilizes the DMN and mirror neurons to help hypnotic subjects embody the roles, response expectancies, sensations, emotions, and body language that their hypnotist suggests to them or that they present to themselves in self-hypnosis. This hypothesis is remarkably consistent with the socio-cognitive tradition of hypnosis since it emphasizes the social psychological aspects of how a person could come to hear a hypnotic suggestion and utilize their empathy to embody the experience that has been suggested to them. This hypothesis might also explain the difficulty in defining hypnosis since it can be argued that many empathic experiences seem to create trance-like experiences, such as love at first sight, becoming deeply involved with the characters in a book, having a powerful empathic experience with a client in psychotherapy, and/or long term meditation on one's own phenomenological experience. The experience of trance in these seemingly non-hypnotic contexts might simply be a sign that we have utilized our empathy in a powerful way that has altered our sense of self. This leads to the next topic regarding the powerful ways that empathy can alter our experience of the self and the concept called theory of mind.

Empathy, Hypnosis, and the Neuromatrix of the Self

Researchers have known for many years that hypnosis seems to have a special effect on the self (Faria, 1819; Forrest, 1999; Hilgard, 1977; Kihlstrom, 1987). An example of this phenomena includes recent research that has shown the remarkably flexible self-structure of high hypnotizables who can experience a completely new sense of self in response to hypnotic suggestions to alter their identity (Barnier et al., 2010; Cox & Barnier, 2010, 2013). These subjects not only experienced profound alterations of self in response to hypnosis but also displayed greatly diminished signs of self-recognition when challenged to interact with a mirror or to talk with a close friend who knows them from real life. Another example is the tradition of neo-dissociation (Hilgard, 1977), which has demonstrated that many people can experience the sense of contacting other parts of themselves in hypnosis as if they had a family of ego states (Watkins & Watkins, 1997) operating within them at all times. The neo-dissociative tradition has hypothesized that there is an executive ego that integrates these aspects of self (ego states) and under

ordinary conditions keeps one's phenomenological experience of self as being unitary and stable when in reality it might be polypsychic (Frederick, 2005).

Another interesting aspect of neo-dissociative research is that it has demonstrated that ordinary people can experience their own actions and cognitions during hypnosis as if they were *involuntary* (Kihlstrom, 1992). A person can experience a suggestion to imagine that their head is "becoming very heavy and falling forward" as if their behavioral response to do so was involuntary and not volitional. Socio-cognitive theorists have tended to be skeptical of neo-dissociative and polypsychic theories of identity and have emphasized that these alterations of self might just be temporary roles that they are acting out (Spanos, 1996). However, even this position accepts the notion that hypnosis can alter the self temporarily and that ultimately our identity as human beings is merely a believed-in imagining, which is "constructed, role governed, and performed" as if it was real (Sarbin, 1998, p. 137). It is safe to say that no matter how you look at this issue, there is much evidence that processes of hypnosis can alter our experience of self and agency. It will be seen later that the ideas of self that have been proposed by the Bon-Buddhist schools of Dzogchen meditation (Wangyal, 2005, 2011) are consistent with both the socio-cognitive concept of the self as being a believed-in imagining as well as the neo-dissociative idea that there is a kind of executive ego actively constructing our experience of self.

People often attribute the sense of involuntariness and the alteration of their sense of self to the magical power of the hypnotist. However, I would like to propose that the real magic may come from the way their empathic perceptions of the world are based in a neural process called theory of mind (TOM). TOM (Gallese, 2009; Mahy, Moses, & Pfeifer, 2014) can be understood to be the neural process by which we attribute agency and a sense of self to our own actions and the actions of others. It is a deeply empathic process in that it represents a process that is fundamental to empathy, such as how we attribute a sense of self or a sense of other to actions, experiences, mentation, and objects in the world, including our body. TOM is also thought to be embodied by the activity of brain regions in the DMN, such as the cingulate cortex (Gallese, 2009; Mahy et al., 2014). Our experience of the self is therefore an emergent property (Varela, Thompson, & Rosch, 1991) from the neuromatrix (Melzack, 1999) of empathy and TOM-related processing embodied in our DMN. Our experience of self is derived in a neuromatrix as in other experiences, such as the somatosensory cortex, which underlies our conscious experience of the body (Melzack, 1999). In a sense then, it is in fact a believed-in imagining consistent with socio-cognitive tradition of hypnosis as well as the Dzogchen tradition of meditation. It is therefore not that surprising that research in hypnosis has been so successful in altering the self (Barnier et al., 2010; Cox & Barnier, 2010, 2013; Hilgard, 1977) since its creation depends critically on empathy-related processes.

Previously I have hypothesized that the experience of alterations in our experience of identity (self/other) and agency (voluntary/involuntary) may be due to the empathic processes involved in TOM (Wickramasekera II, 2007b). Specifically, I propose that

empathic processes involving TOM that are embodied by the DMN can alter the sense of agency and identity that we readily experience in hypnosis as predicted by both neo-dissociative and socio-cognitive theories. The executive ego, of which neo-dissociation speaks, may in fact be embodied in the empathy-related processes of the DMN. Thus our experience in hypnosis that a magnetic force is “acting on our hands and moving them together” is due to an alteration in our sense of agency by TOM-related processing in the DMN in which we dissociate away our attribution that we are moving our hands together in accordance with neo-dissociative theory. However, the effect is also mediated by our ability to empathically experience the hypnotic roles and expectancies that we have embodied using the DMN in accordance with socio-cognitive theory.

The empathic nature of this alteration in identity and agency can also of course be observed in deeply empathic settings outside of hypnosis, such as when we feel at one with our friends, lovers, family, and our communities in the right social psychological contexts. I hypothesize that just as empathy can create an experience of trance outside of hypnosis, so too can empathy alter our sense of identity and agency without any hypnotic induction at all. A strong empathic experience is all that is needed is to create hypnotic-like phenomena. This may help explain why the hypnosis community has had such difficulty in defining what hypnosis is since its empathic nature makes these phenomena appear in a myriad of other empathy-related situations, such as falling in love, receiving and practicing meditation instructions, and even empathically following a yoga teacher in class.

What Lies Beyond the Self?

Practitioners of mystical traditions around the world have frequently questioned whether the self we experience is illusory in nature for at least several thousands of years (Wickramasekera II, 2014). This is very consistent with the socio-cognitive view of the self as a believed-in imagining. In this section I wish to relate some of the transpersonally oriented ideas within the EIT to ideas that have been developed by the Bon-Buddhist tradition of Dzogchen meditation (Wangyal, 2005, 2011; Wickramasekera II, 2004a, 2007d, 2010). In particular, I wish to examine the similarity of the Dzogchen model of identity to the neo-dissociative and socio-cognitive traditions of hypnosis.

The Dzogchen tradition of meditation can be found in both the Bon and Buddhist religions of Tibet as well as other Himalayan countries (Reynolds, 2005). The tradition of Dzogchen states that the self that we generally experience is an illusion constructed by a deep structure in our mind called the *kunzhi-namshe*. The self that Dzogchen meditators describe could very much be described as a believe-in-imagining consistent with the socio-cognitive theory of hypnosis and dissociative phenomena. The nature of the self is formless in both traditions, and the self is said to rely on the empathy and TOM of the person to discern its own structure and character. A simple way of thinking about this

is to reflect on how much we often rely on feedback from other people to discern who we think we are. Theoretically, this probably means that the nature of self could have a variety of characteristics, appearing to be unitary at times and polypsychic at others depending on the context of the experience of self.

However, some aspects of Dzogchen also support directly some ideas proposed by neo-dissociative theorists of hypnosis. For instance, the *kunzhi-namshe* is said to operate very much like the executive ego described in neo-dissociative theory in that it is constantly dividing the seamless flow of experience into dualistic categorizations, such as self/other, good/bad, and happy/sad, which further divide and define the illusion of self. Over time, these divisions are said to create parts of the illusory self that are experienced under certain conditions and contexts. So, for example, when we do something in the world, we label our self and our actions as good or bad in that instance. These categorizations further define and refine the illusion of selfhood through creating the good “me” and the bad “me.” In this way, the *kunzhi-namshe* works just like the executive ego in that it is integrating and defining the nature of the self-states within a person. Just as the executive ego of neo-dissociation theory, I hypothesize that the *kunzhi-namshe* may well be embodied in the empathy and TOM-related processes of the DMN.

Dzogchen meditators practice a number of meditation- and yoga-related disciplines that are aimed at helping them to gain experience with the true nature of the mind called “the natural state,” which is normally covered over by the illusory experience of self and other dualistic obscurations of consciousness. Several of the practices of Dzogchen are familiar to most readers since they are equivalent to mindfulness meditation. Mindfulness meditation is thought to be a foundation practice for developing the powers of mental introspection necessary to make progress in finding and staying within the natural state (Reynolds, 2005; Wangyal, 2005). It is said that through practicing Dzogchen one can come to experience and embody the true nature of the mind that one has been born with but previously not been able to appreciate. Freedom from the illusion of self that is created by the activity of the *kunzhi-namshe* is said to be necessary to properly experience the natural state in a stable way. Losing one’s sense of self as being separate from others is said to free up vast amounts of a sense of freedom and also a limitless capacity for compassion, empathy, and love. It is even said that the flow of thoughts and chatter throughout the mind might stop at this point. However, some Dzogchen scholars assert that a person’s thoughts might continue although the practitioner no longer relates to them dualistically (Vyner, 2007). Dzogchen meditators aim to gain increasing awareness of the natural state to transcend the illusion of self, which allows the practitioner to realize higher states of wisdom and compassion.

Recent research regarding the neurophysiology of mindfulness meditation seems to support some aspects of the Dzogchen model of how experience with the natural state can relieve our suffering while developing our wisdom and compassion. For instance, studies of the benefits of mindfulness meditation (a foundation practice in Dzogchen) have demonstrated that mindfulness meditation does tend to reliably reduce peoples’

experience of anxiety, depression, pain, and stress while increasing their experience of compassion, happiness, and well-being (Shapiro & Walsh, 2003). Mindfulness is a practice that in essence asks one to completely and empathically attend to one's own phenomenological experience and to stay with it. Like self-hypnosis, mindfulness meditation requires a disciplined form of empathic concentration to one's own phenomenological experience. Thus it is not too surprising to find that its neural correlates are very similar to hypnosis in that the AC has been implicated in many different studies (Spiegel et al., 2010). A recent study of long-term meditators using mindfulness found that the activity of their DMN was greatly reduced compared to novice meditators (Brewer et al., 2011). The DMN has been linked to mind-wandering and day-dreaming in previous research (Buckner et al., 2008). It is thought that long-term meditators might then actually have diminished DMN activity due to their ability to experience a greater sense of the stillness of their mind with reduced thoughts and distractions. Novice meditators frequently complain of distractions when first starting mindfulness meditation, but this difficulty usually diminishes in intensity as one gains more experience with attending to one's own phenomenology in meditation practice.

Dzogchen scholars refer to this "stillness of the mind" as one aspect of the natural state. It is interesting to learn that long-term meditators do in fact show psychophysiological evidence of reduced thoughts (reduced DMN activity) during meditation, just as the Dzogchen tradition asserts that thoughts do diminish with increasing experience of the natural state. This leads to the examination of the question of whether the practice of hypnosis or self-hypnosis could also be utilized toward transcending the illusion of self. A related question might be stated as "Are Dzogchen and mindfulness meditation forms of hypnosis anyway?" Meditation and hypnosis certainly do share many similarities (Holroyd, 2003; Spiegel et al., 2010) besides the empathic nature of their phenomenology and their shared embodiment in terms of neurophysiology, previously examined involving the DMN and the AC. However, there are many differences surrounding the communities, histories, and traditions that have respectively produced these techniques of meditation and hypnosis. It is probably best to describe meditation as a hypnotic-like experience (Krippner, 2005) and leave this question open for now. Someday it may be possible to integrate hypnotic techniques with the teachings of Dzogchen, since the two traditions are very similar in terms of their phenomenology and their ideas about the nature of self. Until that day, it is best satisfy this question through practicing each tradition separately and authentically on its own terms while gaining personal insights into the nature of self-transcendence (Wangyal, 2005).

Summary and Implications for the Future

The main point of this article has been to review the evidence backing the EIT of hypnosis and its implications for an embodied understanding of the self. The EIT defines hypnosis as an experience of enhanced empathy in which a hypnotic subject utilizes

perspective taking, empathic concern, and empathic aspects of TOM to experience alterations in affect, behavior, sensation, thoughts, and his/her mind/body relationship that are suggested by a hypnotist or through his/her own creative and imaginative processes. The EIT attempts to unify many different theoretical and research traditions of hypnosis by demonstrating their common underpinnings in the psychological processes and neuroscience of empathy. The EIT proposes that the experience of hypnosis is embodied in a system of neural networks in the brain that utilize empathy to (a) empathically enact the affect, cognition, body language, response expectancies, social roles, sensations, etc. that are presented to them during hypnosis in accordance with socio-cognitive theories of hypnosis; (b) engage in a convergent psychophysiological relationship with another person in accordance with psychoanalytic, Ericksonian, and polyvagal/social engagement system theories; (c) alter the empathic self/other (TOM) coding of their phenomenological experiences during hypnosis in accordance with aspects of the neo-dissociative and socio-cognitive traditions; and, (d) develop an experiential understanding of the illusion of self, which may lead in some people to its transcendence in accordance with Bon-Buddhist, Dzogchen, and transpersonal scholars. The EIT also proposes that the self is a believed-in imagining that is created in a neuromatrix that utilizes empathic processes to give it a sense of definition and solidity.

There are many implications for future research involving the EIT. First, it would be good to revisit some of the initial research that examined the relationship between hypnotic ability and empathy while controlling for context effects (Council et al., 1986). It would also be good for these studies to employ the Stanford Form C (Weitzenhoffer & Hilgard, 1962) as a measure of hypnotic ability due to its superior psychometric properties and perhaps also a performance-based measure of empathy so that empathic accuracy could be assessed as well as empathic disposition. Many questions have been left open regarding the psychophysiology of the DMN, AC, and other brain regions as to whether they are truly the areas involved with the embodiment of empathy, TOM, and the trance states experienced with hypnosis and other strong empathic phenomena, such as falling in love, psychotherapy, and sexual intimacy. More precise studies of the specific neurophenomenology (Lutz & Thompson, 2003) of hypnosis and strong experiences of empathy are needed, and these studies will certainly need to employ a more thorough focus on the precise phenomenology of the participants though employing such measures as the Phenomenology of Consciousness Inventory (Pekala & Kumar, 2000), heuristic analysis (Moustakas, 1990), and the Experiential Analysis Technique (Sheehan, 1992). These same research techniques could also be utilized to examine my prediction that strong empathic experiences are all that is necessary to induce hypnotic-like phenomenology.

Finally, there are many implications for clinical practice involving the EIT, such as a general directive for clinicians to become more acutely aware of the underlying grounding of hypnosis in a strongly empathic experience. Any strong empathic experience can become trance-inducing, and knowledge of these phenomena may be

useful for therapists in encouraging therapeutic transference (Gill & Brenman, 1961), understanding countertransference as an potential empathic device (Tansey & Burke, 1989), building a strong therapeutic alliance with convergent psychophysiological mirroring (Banyai, 1998; Rossi & Rossi, 2006), and helping therapists time their interventions with patients' cognitions toward moments when their self-structure might be more open for feedback/interpretation. I hope that this article might serve as an encouragement for therapists to consider that empathy is perhaps a much more powerful clinical tool than they ever realized and that strong empathic experiences are very naturally hypnotic. Furthermore, all therapists should be encouraged to practice mindfulness meditation to further develop their capacity to kindle and enact their patients psychophysiology and to activate their social engagement system (Porges, 2011; Tansey & Burke, 1989). Finally, it is hoped that many practitioners of hypnosis will become interested in the psychology of mindfulness, Dzogchen, and other forms of meditation that have been associated with the transcendence of self. It is hoped that more writings such as these will appear in the literature of psychotherapy to build a mutually beneficial bridge of understanding (Wickramasekera II, 2004b) between the Bon-Buddhist/Dzogchen schools of meditation and the hypnosis community that will allow us to help ever-increasing numbers of people to further develop their wisdom and compassion.

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