Thalbourne's

Theory of Psychopraxia

| *by LANCE STORM & MICHAEL A. THALBOURNE*

Introduction

Psychopraxia theory attempts to unify normal and paranormal psychology as well as motor action and cognition so that the conceptual distinction between (i) ESP and PK and (ii) normal information-acquisition and normal motor control might be eliminated, since, for example, both sides of the dichotomy are instances of action. The theory emphasizes four fundamental aspects of action, whether that action occurs endosomatically (within the body) or exosomatically (outside the body):

1. The self, not defined further than it being inclusive of the "I," the common denominator of all experience and the co-agent of all action (this description allows for additional agency of the unconscious component of the self);
2. The "pro attitude": A person may be said to have a pro attitude toward state S when they would prefer S rather than -S (not S) if those two alternatives were to be brought to their attention. Under this heading fall goals, desires, wishes, intentions, needs, preferences, and dispositions whether conscious or unconscious. Psi missing is also postulated to be the result of a pro attitude, perhaps unconscious, toward obtaining low scores. It is postulated that there is a hierarchy of pro attitudes, and the most potent one wins out. The self is said to "adopt" a pro attitude;
3. The goal-state S that is to be brought about, whether in the so-called "mental" sphere or in the "physical" sphere, is irrelevant;
4. The set of intervening neces-

The term psychopraxia is derived from two Greek words: psyche, which means "soul," "mind," or "self," and praxia, from which we get our word "practice" [...]

> sary conditions (unspecified, but probably psychophysiological) mediating between the self and its pro attitude and the goal-state S (Storm & Thalbourne, 2000, p. 280).

Intellectual history and ancestry

The theory of psychopraxia first came to light in the late-1970s, effectively as an addendum to Thalbourne's Ph.D. dissertation (Thalbourne, 1981). The definition then entered Thalbourne's *Glossary* (2003), after which the construct and basic psychopractic concepts were expanded into a monograph (Thalbourne, 2004). The term *psychopraxia* is derived from two Greek words: *psyche*, which means "soul," "mind," or "self," and *praxia*, from which we get our word "practice" (derived from *prattein*, meaning "to accomplish" or "bring about"). Influences on Thalbourne include Thouless and Wiesner (1947), and Edge (1985).

Basic premises and postulates

Both the endosomatic and exosomatic aspects of our being speak to one fundamental ontological process, but the terms merely locate psi, respectively, inside or outside the body of the experient. Thalbourne considers, for the parapsychologist's purposes, that only *exosomatic psychopraxia* is of interest: It is the self/psyche "accomplishing" something *outside* the body, referring specifically to actions and cognitions beyond the normal compass of the sensory modalities. *Endosomatic psychopraxia* is no less a mystery than exosomatic psychopraxia for, as is implied by Thalbourne, the fundamental organic processes (e.g., of life) are still not understood. A comparatively broader knowledge (very often theoretical or modelled) of endosomatic (internal) functions is merely born of a cultural/historical advantage—these functions received greater attention from anatomists, physicians, neuroscientists, etc., especially in recent centuries. The exosomatic functions (e.g., paranormal influences), however, are epistemologically disadvantaged due to cultural and historical prejudices. Exosomatic psychopraxia embraces both ESP and PK, but the unification continues with ESP and PK being merged into a single construct which Thalbourne *neutrally* calls psychopraxia because ESP and PK are indeterminable in any instance where psi is discernible (even experimentally). The reason for the ambiguity comes from the fact that ESP and PK are discourse-dependent concepts that have emerged out of a fundamentally dualistic framework—any kind of paranormal cognition is automatically labelled ESP because it largely manifests mentally, and any kind of paranormal action is automatically labelled PK because it largely manifests physically. Researchers tend to avoid any attempt at disambiguation or clarification.

Specific predictions and laws

In continuing with his argument, Thalbourne (2004) points out that philosophical systems or paradigms necessarily and subjectively label psi effects according to their ontological assumptions about reality. In central state materialism, for example, all psi would be PK—since mental activity is reducible to brain function, ESP (nominally mental) can actually be seen as paranormal interaction between brains, or between a brain and any

sufficiently displaced inanimate element in the environment, so that all ESP = PK. In idealism (dogmatic, critical, etc.), all psi would be ESP—since brain activities and apparently external events exist only as perceptions in the mind, PK (nominally physical) can actually be seen as paranormal interactions of mental perceptions, so that all PK = ESP. It could be argued that it would be possible to differentiate two types of psi from *within* a philosophical doctrine on the basis that the two explanations differ.

Applications

Use of the *I Ching* (an ancient Chinese system of divination) in a laboratory situation is a prime example of ostensible psi where the psychopraxia concept may be called in to explain the effects as it does not depend on the ESP and PK constructs (see Storm, 2008; Storm & Rock, 2014). Thalbourne (2004) presented the theory of psychopraxia as an alternative viewpoint on the alleged paranormal process taking place in the typical psi experiment, and drew attention to a possible lack of parsimony in the above-mentioned conventional explanations (see **4** above). Psychopraxia allows for an understanding of paranormal process from a psychopractic (i.e., non-dichotomous) point of view that attempts to demonstrate the hypothesized redundancy of the terms ESP and PK. Regarding the *I Ching*, the user will note that PK might be the mechanism (either the user consciously focuses on a particular outcome and knows how the coins need to fall to get a desired result, or the user unconsciously "arranges" a desired outcome). Other users may suggest precognition explains the effect (i.e., there may be an intuition of the future outcome so the question is framed around that intuition), in which case, the coin-throwing component is a perfunctory exercise. Other combinations of PK and ESP might be suggested. The ESP/PK dichotomy is unresolvable in the *I Ching*.

Other examples of documents, supportive evidence

Thalbourne's (2004) theory of psychopraxia has received only minor commentary from researchers in the field of parapsychology (e.g., Alvarado, 1983; Beloff, 1985, 1988; Braud, 1983; McBeath, 1985). The major studies on psychopraxia have not been by a broad range of investigators (e.g., Storm, 2003a, 2003b, 2005a; Storm & Thalbourne, 2000, 2003, 2005a, 2005b; for an overview, see Thalbourne & Storm, 2005). The major reason for this deficiency has to do with the fact that since 2004 researchers are either still grappling with the theoretical and practical implications of psychopraxia (which are a challenge to conventional understandings in parapsychology), or they simply avoid the issue. These problems can only be resolved with time. Thalbourne's primary point, however, is not to settle the theoretical, practical, and philosophical debates, but merely provide a neutral terminology that does not try to reflect reality, but provides an ontology-free or neutral framework by which all researchers can work.

Application to non-parapsychological phenomena and mainstream domains

The model expressly makes so-called normal phenomena a primary consideration by placing normal alongside paranormal. The same parameters hold as were defined above (see **1** above)—namely the self; the pro attitude; the goal-state; and the set of intervening necessary conditions mediating between the self and its pro attitude and the goal-state S (Storm & Thalbourne, 2000, p. 280).

Future research and applications

Thalbourne's theory sometimes presents in a way that relies heavily on anecdotal material in its construction, and his propositions are often openly speculative (see especially, Thalbourne, 2004,

Chapter 5). However, findings so far (e.g., Storm, 2002, 2003a, 2003b, 2008; Storm & Thalbourne, 2005a, 2005b) have not put psychopraxia in a bad light, though support for its hypotheses has not always been found (e.g., Thalbourne & Storm, 2005b). Thalbourne introduces two major terms— pro attitude and necessary conditions—but his use of other terms, such as self and goal-oriented, are not original. Thalbourne's two original terms seem logically to describe psi as a process inherently dependent upon the agent, but the difficulties associated with the concept of agency and whether conditions are necessary, conducive, or sufficient, need resolution (see Storm, 2005).

Differentiating from other models of psi

Two theories principally similar to psychopraxia theory are comparable: Jung's (1960) synchronicity theory, and Stanford's (1974a, 1974b, 1990) psi-mediated instrumental response (PMIR) model. Firstly, synchronicity: Jung proposes that two or more events (usually an inner mental event and an outer physical event) constitute synchronicity when a meaningful connection can be made between the events, provided there is no mechanically causal connection between the two, so that the two in unison manifest as a coincidence (Jung, 1960, para. 849–850). Synchronicity can be goal-oriented, and it does resemble ESP (telepathy, clairvoyance, and precognition), but it does also require that meaningfulness be identified (hence, the goal-orientation), whereas psychopraxia is not focused on identifying a meaningful relationship between an internal image and an external goal. However, to the extent that a manifested psychopractic goal is identified as being meaningful because an internal image (as expressed in a pro attitude) is collated with it, psychopraxia and synchronicity are similar. In such cases, then, as Jung believed, ESP and PK (and therefore exo-psychopraxia) share the same phenomenology as synchronicity. Secondly, PMIR: Stanford (1974a) proposed that an "organism nonintentionally uses psi to scan its environment for need-relevant objects or events or for information crucially related to such events, and when obtained, the organism tends to act in ways which are instrumental in satisfying its needs in relation to the particular object or event in question" (p. 35). Psychopraxia is similar to PMIR in that, "needs" can be equated with "pro attitudes," and PMIR also works to a goal, although the psychopractic goal does not have to be paranormal in nature (i.e., it can be normal). Stanford acknowledged unconscious agency as a source of goals (as does Jung and Thalbourne in their theories).

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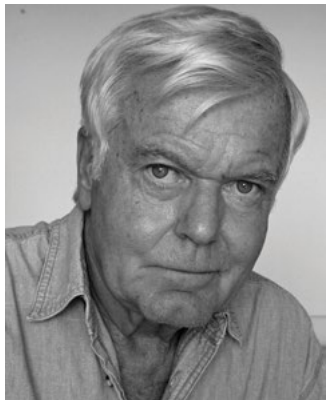
A Model for Psi Based on Information Transfer Between Brains



| *by JON TAYLOR*

Introduction

The model suggests that precognition is the fundamental phenomenon of psi, and that it consists of a link with the percipient's brain in the future. It is literally *pre*-cognition, referring to the future cognition of an event.

The occurrence of precognition supposes that the future events *already* exist in some sense. The concept conforms to a block universe model in which past and future events exist in the space-time continuum, in accordance with the special theory of relativity. Despite the apparently fatalistic implications of a determined universe, the concept has widespread support. For example, Paul Davies (2002, p. 42) suggests that "physicists prefer to think of time as laid out in its entirety—a timescape, analogous to a landscape—with all past and future events located there together."

David Bohm's theory of the implicate order is compatible with a block universe. The implicate order is based on the zero-point energy field that extends throughout space and time. It unfolds to create successive slices of space-time, which build up to form the contents of the block. Bohm suggests that similar structures created at different places and different times *resonate* within the implicate order and unfold in a form in which they are more similar to one another (Bohm, 1990, p. 93). The resonance is attributed to non-local effects of de Broglie–Bohm pilot waves on the quantum mechanical processes involved, and a recent experiment gives definite evidence for such pilot waves (Mahler et al., 2016).

Structures in the environment are represented by *processes* in the brain, in which neuronal networks are associated with one another to form spatiotemporal patterns of activation. Similar patterns, activated at different locations in space-time, resonate allowing a transfer of information.

In the case of a future event *caused by outside circumstances*, the percipient associates information about the event with information about her previous experi-

ences with the event. If the event is significant for her well-being, an *appraisal* is carried out in the amygdala (LeDoux, 1998, pp. 283-296). Re-entrant stimuli from the amygdala increase the degree of activation of the pathway through the networks. This leads to a *concentration effect* and produces a strong resonating field.

Precognition occurs when the percipient (spontaneously) activates a pattern in the present that is similar to the pattern activated in the future. The patterns resonate, and the synaptic connections forming the present pattern are slightly strengthened. This facilitates the flow of a few extra impulses that travel, via re-entry circuits, to the *working memory system*. The working memory cells sustain their activation, leading to the sustained activation of the pattern (Fuster, 2003, pp. 155-164). This may lead to conscious awareness of an event similar to the event experienced in the future.

If the future event is *caused by the percipient*, the event may be subject to the percipient's intention. In the present, she intends to cause the event, and in the future, she is normally able to cause the event. The patterns are similar and they resonate, enabling her to *precognize* the knowledge that she will fulfill the intention. However, if she is unable to fulfill the intention (e.g., because an accident will prevent her) resonance doesn't occur. The absence of resonance can serve as an *intuitive warning*—a foreboding that "something is wrong." It enables her (unconsciously) to change the intention and do something else instead.

This detection of the absence of an intended future forms the basis of *intuition*, in which a percipient becomes instantly aware, say, of a danger perhaps without knowing exactly what the danger is. Intuition is by far the most important application of psi, and it can be applied to explain survival instinct, homing instinct, dowsing, and the *I Ching*. It also explains the results of target-guessing experiments.

Intellectual history and ancestry

After reading J.W. Dunne's *An Experiment with Time*, I was inspired to undertake a detailed investigation of precognition. However, from the outset, I was surprised to find incongruities in the approach often taken by parapsychologists.

The first was the assumption that precognitive contacts are made directly with inanimate objects and events in the future. This seems contrary to a common sense view that precognition must refer to one's future experience or knowledge of an event, just as telepathy ostensibly refers to another person's knowledge of the event. It is also contrary to Dunne's observation that precognitive dreams refer to the experience of an event in the future, not to direct connection with the event.

Telepathic contacts are difficult to produce. Telepathy occurs when information is transferred from one person to another.

The second was that many parapsychologists have come into confrontation with mainstream science by suggesting that psi requires intervention from a non-physical consciousness. Such an approach has led to skepticism toward psi.

I decided to take a strictly materialist approach, in which I attempt to overcome these incongruities and present psi in a more amenable way to mainstream science. The model is the result of a 25-year investigation, and it is fully described in my forthcoming book *Contact with the Future*.

Basic premises and postulates

The model is based on the premise that psi can be explained as a transfer of information between living brains through space and time. The model postulates the following:

i) Telepathic contacts are difficult to produce. Telepathy occurs when information is transferred from one person to another. Sender and percipient activate neuronal patterns in which each associates knowledge of the event with knowledge of his or her previous experiences with the event. The patterns are different and resonance is less likely to be produced. The significant results of many telepathy experiments are explained as precognition of the percipient's future knowledge of the target, knowledge obtained on receiving feedback of the target information.

ii) Clairvoyant contacts do not occur. This is due to the dissimilarity between an object in the environment and a neuronal pattern activated in the brain. In any case, a direct clairvoyant contact would be difficult, if not impossible, to explain according to current physical principles. For example, how can an inanimate target collect and encode information about itself in a form intelligible to the brain? And how can the brain possibly obtain selectivity between the actual target and the "decoys"? It is probably due to the problem of explaining such a phenomenon in physical terms that many parapsychologists speculated on the necessity of intervention from consciousness. The significant results of experiments are attributed either to precognition or to precognitive telepathy with a person who has knowledge of the target information.

iii) Micro-PK influences do not occur. Random number generator (RNG) experiments have been performed in which the bit streams are ostensibly influenced in accordance with the participant's conscious intention (Jahn & Dunne, 2005). However, the results are explained in terms of intuitive decisions made by the operator of the RNG to choose the best moments at which to sample the bit stream and produce the intended result—in accordance with Edwin May's decision augmentation theory (Taylor, 2014, pp. 33-34).

iv) There is no confrontation with the intervention (bilking) paradox in precognition. A percipient would confront the paradox if he were to change the event precognized. However, if he intends to change the event, it really means that he intends to cause an event that is different from the event he finds himself causing in the future. The patterns corresponding to his present intention and future experience are different and resonance doesn't occur. The percipient obtains no information about the event he intends to change. This conclusion is summarized as the *principle of intentionality,* which states that *a precognition can occur only when, as a result of the precognition, the percipient is either unable to change, or does not intend to change, the future event precognized.*

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Specific predictions and laws

i) Precognitive contacts are with the percipient's future experience or knowledge of the event. This means that feedback about the target (or result of the experiment) must be given to the participant in the future. The Honorton

and Ferrari (1989) meta-analysis included a subset of experiments in which details were provided about feedback to participants. The results showed that when no feedback was given, *the significance of the results fell to chance expectation*.

ii) Precognition is more likely when the experience of the event in the future produces strong emotional impact. If the event is significant for personal well-being, strong emotional impact is produced and the degree of activation of the pathway through the networks is greater. This leads to strong resonance, more likely to affect the pathway activated in the present.

iii) Precognition is more likely when the temporal distance to the future experience is short. The synaptic connections forming the pathways change constantly due to neuroplasticity. Closer matching and stronger resonance are expected when the *precognitive interval* between the present and future activations of the pattern is short. The results of the Honorton and Ferrari (1989) meta-analysis were highly significant for precognitive intervals of a few hundred milliseconds, and they fell to non-significance only when the interval was increased to more than one month.

iv) Extroverts perform better in experiments than introverts. Extroverted people create fewer associations with their previous experiences of an event. The pathway through the networks is shorter and re-entry circuits enable more re-activations of the pathway to be produced in a given amount of time. The resonance is stronger.

v) The results of an experiment tend to go in the direction of the participant's belief towards obtaining those results. This is the well-known *sheep-goat effect*, in which believers in ESP score above chance, whereas non-believers tend to score below chance. It is because the non-believer makes intuitive decisions to try to select target options that lead to "scoring misses" instead of "scoring hits" (see next section). The proportion of hits falls to below chance expectation.

The results of experiments confirm the predictions. The emotional impact produced by "scoring a hit" leads to resonance, but the impact falls when the participant becomes bored with the experiment [...]

Application of model to target-guessing experiments

Target-guessing experiments refer to events caused by the participant and require the use of intuition. In a forced-choice experiment, the participant intends for "the selection of a given target option" to be associated with the idea "scoring a hit" when he receives feedback of the target information in the future. In the case of an incorrect option, there will be no experience of this occurring, and an intuitive warning is produced. He unconsciously moves on to another option and repeats the process. When he arrives at the correct option, there is no intuitive warning and he registers the option. His future experience is that in which he *does* associate that option with scoring a hit, on receiving feedback.

The same procedure applies to free-response and remote-viewing experiments. The participant unconsciously scans an inventory of candidate items until she is left with one that matches an item in the target and is associated with producing a successful result on receiving feedback.

The results of experiments confirm the predictions. The emotional impact produced by "scoring a hit" leads to resonance, but the impact falls when the participant

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becomes bored with the experiment; it leads to a *decline effect*. In remote viewing experiments, strong emotional impact is produced when arousing targets are used, or targets representing sudden changes in entropy.

Application of model to pre-stimulus response experiments

These experiments refer to events caused by outside circumstances. The participant is shown a series of arousing images (erotic photographs) interspersed with control images (calm photographs). Increased arousal is observed during a period of up to a few seconds prior to exposure to the arousing image, but little or no effect is observed prior to exposure to the calming image. The arousal is usually monitored by measuring the participant's electrodermal activity.

The activation and appraisal of the networks corresponding to the arousing image will produce strong emotional impact, a corresponding physiological response, and a strong resonating field. The field influences any similar patterns spontaneously activated a few seconds earlier. The earlier activations are sustained to the level at which they also trigger a physiological response; but the degree of activation doesn't reach the higher threshold necessary for conscious awareness (Fuster, 2003, p. 254).

These experiments illustrate the importance of the future event having emotional impact and of it occurring within a short precognitive interval. A meta-analysis by Mossbridge et al. (2012) gives strong evidence for the effect.

Application to mainstream domains

i) The model suggests that precognition and ordinary memory may work in exactly the same way. When retrieval occurs, the brain activates a number of alternative pathways until one of them matches fairly closely the pathway activated at the time of an initial experience. Resonance occurs and the activation is sustained until the memory is recalled.

Retrieval from the past is easy to achieve because the pathway corresponding to a past experience has already been consolidated at the time of the experience; there is a greater tendency for impulses to travel along the same pathway when stimuli are applied in the present. Furthermore, the synaptic connections were strengthened at the time of the experience and they will not have changed much when the pathway is re-activated in the present. Resonance is easy to obtain (Taylor, 2007, pp. 559-561).

ii) The model explains how the brain recognizes items in memory. The brain doesn't need a second memory to recognize the items it needs. Instead it uses the *same* memory a moment later (in the future) and the required items are precognized a moment earlier (in the present). The brain associates a number of items with the idea of solving the problem, and intuitive decisions are made to systematically eliminate the unsuitable items, until it is left with a suitable one. The activations of the pattern corresponding to this item are sustained, and the information goes on for further processing. The mechanism helps explain how the brain functions as a self-organizing system.

iii) The model explains the results of Benjamin Libet's landmark neurosurgical experiment. The experiment showed that when a stimulus is applied directly to a patient's brain, it requires approximately 0.5 seconds of

neural activity in order for awareness of pain to be produced. However, when the stimulus (a pin-prick) is applied to the patient's hand, the pain is produced at the same moment the stimulus is applied. Libet suggested that the conscious feeling had been *referred backwards in time* to coincide with the stimulus, and physicists have been unable to offer a materialist explanation for the effect (Libet et al., 1979).

However, the receptor organs in the skin frequently fire impulses. Some of them activate perceptual patterns in the brain, but they lead only to vague awareness of the skin. When the external stimulus is applied, a burst of activations of the perceptual pattern is produced, and this influences the patterns spontaneously activated in close temporal proximity. The earlier activations are sustained and appraisal leads to the earlier feeling of pain.

Future research and applications

i) Confirming that precognition refers to future knowledge of the target. Trial-by-trial feedback is given to participants in a test group, but not to participants in a control group. The future targets are generated for trials in both groups, so all participants have the same opportunity to "clairvoyantly" detect the targets—if such a phenomenon exists. All participants are equally subject to the possibility of telepathic influence from the experimenter. If there is a *difference* between the results for the two groups favoring the test group, this can be attributed to the test group members' precognizing their future knowledge of the targets.

Positive results will suggest that feedback must be controlled in order to obtain better repeatability. Target-guessing experiments can now be carried out to compare the performance of selected participants: extroverts vs. introverts, and believers vs. non-believers. Experiments can also measure the effects of varying the precognitive interval and the degree of arousal produced by the target.

ii) Combining ordinary precognition with intuition to obtain a confidence rating. In target-guessing experiments, the intuitive warnings identify only the incorrect target options, and the participant has to look for the *absence* of a warning to decide which one is the actual target. If he has made the correct decision, his future experience will be that of associating the target with scoring a hit, on receiving feedback of the target information. This means that *after* registering his choice, but before receiving feedback, he can use ordinary precognition to detect this future experience. It will confirm that he made the correct decision in the first place. Thus, he can assign a confidence rating to each trial and the results should be improved considerably by accepting only trials with a high rating.

Trials are now performed in which the image of the percipient is recorded during the trial and played back to the starer at a later time.

iii) Testing the effect of time displacement in telepathy. A remote staring experiment is used to detect telepathy. For each trial, the starer either looks or does not look at a live image of the percipient on a video monitor at another location. The percipient spontaneously associates the idea "looking" with the idea "an influence being produced" on her during the trial. The starer creates a similar association and continually activates a similar pattern to produce a concentration effect. Any movement or gesture by the percipient will aid selectivity by creating a unique *associative link* with the starer for that particular trial. Positive results indicate that real-time links have been established.

Trials are now performed in which the image of the percipient is recorded during the trial and played back to the starer at a later

time. Thus, the trial consists of a link between the starer and the percipient *as she was* at the earlier time. If the results are not affected by time displacement, it will help confirm Bohm's suggestion that the resonating fields are not subject to the constraints of time.

Differentiating from other models of psi

As far as I know, this is the only model that gives a complete description for the physical principles involved in transferring information through time, as well as the neuroscientific principles involved in detecting the transferred information in the brain.

A comparable model has been proposed by Rupert Sheldrake, who suggests that similar biological systems possess morphogenetic fields that resonate and enable past forms to be replicated in the present. However, he suggests that the fields *build up* over as new organisms add to them. The replicating influences therefore come from the past but not from the future (Sheldrake, 1988). Such a model as it stands would explain real-time telepathy, but not precognition, for which Sheldrake offers an explanation involving consciousness.

A comparable model has been proposed by Rupert Sheldrake, who suggests that similar biological systems possess morphogenetic fields that resonate and enable past forms to be replicated in the present.

Bohm (1990, p. 93) points out that, in the implicate order, all things of a similar nature are "connected together and resonate in the totality." Thus, similar forms mutually influence each other in the implicate order in such a way that when they unfold, they inherently contain the information transferred in either direction through time.

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Imagery Cultivation Theory

| *by LANCE STORM & ADAM J. ROCK*

Introduction

Storm and Rock (2009a) argue that there is opportunity to advance on the ganzfeld methodology by implementing a new protocol—imagery cultivation (IC)—using a shamanic-like journeying protocol. IC encourages active cognitive processes rather than adherence to passive processes as in the ganzfeld condition. We propose that the focus on signal-to-noise ratio (i.e., noise reduction) has created a paradigmatic block to alternative, even antithetical, methodologies that encourage fantasy, imagination, and other *active* cognitive processes (as in IC). To this end, two treatments, used separately and in unison, have been proposed and tested: (i) verbalized instructions (akin to guided imagery, running for 19 minutes in past studies), and (ii) shamanic-style monotonous drumming (optionally set at 8 b.p.s.). The drumming can run concurrently with the instructions. Another procedure has been tried involving instructions shortened in duration from 19 minutes to 9½ minutes, slight changes to the instructions and use of ethereal (meditation) music instead of drumming (Storm, in progress). These conditions are administered to a participant just before a free-response task. The participant is required to identify either (a) a concealed target; or (b) precognize a randomly generated future target.

Intellectual history and ancestry

Given the claim that shamans use ostensibly paranormal information in order to "meet the needs of [their] group and its members" (Rock & Krippner, 2011, p. 7; see also, Rogo, 1987), Storm and Rock (2009a) developed their IC Model to incorporate a shamanic-*like* journeying protocol based on shamanic practice. They expressly designed this protocol in such a way as to facilitate and stimulate the imagination (see Harner, 1990), thereby cultivating the production of images from the unconscious, said to be the source of psi. A variety of methods may be used to elicit journeying

"Historically, psi has often been associated with meditation, hypnosis, dreaming, and other naturally occurring or deliberately induced altered states of consciousness"

states, such as sleep deprivation (Achterberg, 1987), cultivating visual mental imagery (e.g., entering ''tunnels'' leading to the ''underworld''; Noll, 1985), ingesting psychoactive substances (e.g., ayahuasca, psilocybin; Harner, 1987), sweat lodges (Jilek, 1982), and sensory deprivation (Achterberg, 1987). However, the most commonly used method is auditory driving, a technique where the shaman listens to a monotonous percussive sound, most frequently drumming (Harner, 1990). Storm and Rock (2009a) added the instructional component as a means of bringing the participant's intentions in line with the experimental aims.

Basic premises and postulates

The IC model regards shamanic techniques and, similarly, shamanic-like techniques, as being psi-conducive, with the alleged psi signal being somehow embedded in the cultivated imagery. Bem and Honorton (1994) assert that, "Historically, psi has often been associated with meditation, hypnosis, dreaming, and other naturally occurring or deliberately induced altered states of consciousness" (p. 5). Perhaps the most widely used technique in this context is the ganzfeld ("total field") which may be defined, in broad terms, as a "homogeneous perceptual environment" (Bem, 1993, p. 102). Specifically, the ganzfeld consists of an undifferentiated visual field created by viewing a red light through halved translucent table-tennis balls taped over a percipient's eyes. Additionally, an analogous auditory field is produced by listening to stereophonic white or pink noise (i.e., a monotonous hissing sound; Bem, 1993). An 'agent' is required to "psychically communicate" (Milton & Wiseman, 1999, p. 387) a picture target or movie-film target to an isolated 'percipient' who is in the ganzfeld condition of *homogeneous sensory stimulation*. Therefore, ganzfeld is usually regarded as inducing an active altered state of consciousness (ASC) that is considered psi-conducive. However, it is arguable whether there can be objective evidence (e.g., EEG measures) or subjective evidence (e.g., percipients' self-reports) that, if percipients are in a ganzfeld (Gz-ASC), it is *the* Gz-ASC that is psi-conducive, or some other partial, or sub-condition, that is psi-conducive (e.g., relaxation or the homogeneous field acting alone). Also, Storm and Rock (2009a) argue that the ganzfeld protocol does not include instruction to *actively* target the target, while in the putative Gz-ASC. Rock, Storm, Harris, and Friedman (2012) have found that their participants under the IC condition do tend to report an ASC (controls do not), and the IC has produced psi effects above chance.

Specific predictions and laws

The IC model follows the findings of previous experimental research (e.g., Rock, Abbott, Childargushi, & Kiehne, 2008; Rock, Wilson, Johnson, & Levesque, 2008; Woodside, Kumar, & Pekala, 1997) using non-shamans, which found that participants exposed to a shamanic-like stimulus condition (i.e., journeying with the aid of monotonous drumming) report significantly higher amounts of visual imagery compared to controls. Advancing from those findings, support for unconscious paranormal processes has been

found in the so-called presentiment effect (e.g., Mossbridge, Tressoldi & Utts, 2012; Radin & Lobach, 2007). Radin (2006), in his review of the literature, concluded that there appears to be a future-oriented capacity in human beings that elicits unconscious but measurable physiological reactions to stimuli micro-seconds *before* the stimuli are actually presented. Mossbridge et al. (2012) provided the empirical evidence of "unexplained anticipatory activity" (p. 3). Such findings are physiological evidence for unconscious cerebral/mental processes that may include a paranormal aspect. Critically, Storm and Rock argue that verbal instructional guidance can actively trigger the cultivation of unconscious visual imagery, which can be rendered into consciousness, can be of an anticipatory nature, indicating either real-time psi (e.g., clairvoyance) or future-telling (i.e., precognition).

Applications

The various remote viewing (RV) protocols follow a similar understanding as the IC model. Thalbourne (2003) defines RV as "a neutral term for *general extrasensory perception* [GESP] . . . especially in the context of an experimental design wherein a *percipient* attempts to describe the surroundings of a geographically distant *agent*" (p. 107). Neither distance, nor size of target, seems to influence RV outcomes. RV has been investigated by other researchers (e.g., Dunne, Dobyns, & Intner, 1989; Jahn & Dunne, 1987). Schmeidler (1994) concluded that the overall evidence is indicative of a remote viewing procedure that is psi conducive. It is perhaps noteworthy, as indeed Storm (2003) has pointed out, that a variant of RV—extended remote viewing—consists of dynamic methods aimed at cultivating a semi-trance state or dissociative state, both of which are meant to help establish a connection with the target. Indeed, the RV-state is conceptualized by Joseph McMoneagle (1997, 2000) as a form of "information retrieval," and thus an active condition. Since the remote viewer reports whatever is being seen, felt, heard, or otherwise perceived, McMoneagle claims that successful RV therefore requires that the remote viewer must learn to respond through writing or relating the RV information directly. Thus, as McMoneagle also points out, RV can be learned, and the basic ability is innate in most people, but may need refining. Likewise, IC does not confine its protocols to shamans and testing so far has only been on non-shaman participants (e.g., university students).

Other examples of documents, supportive evidence

Storm and Rock (2009b) have provided some supportive evidence for their claim—participants (non-shamans) in the IC condition (shamanic-like journeying instructions, followed by 15 minutes of monotonous drumming) were required to describe verbally, and then rank, a randomly-selected concealed line-drawing, which they held throughout the treatment. Number of direct hits (34.5% where P_{MCE} = 25%) in the shamanic-like condition was significant; hit rate for control-condition participants was at chance (22.6%). In a first replication study (Rock, Storm, Harris, & Friedman, 2012), 200 participants (non-shamans) were randomly assigned to one of four conditions: (1) instructions + drumming; (2) instructions only; (3) drumming only; and (4) control condition (i.e., no instructions, no drumming). Hit rates were above chance (not significantly) in all three treatment conditions, and below chance in the control condition. Pekala's (1991) Phenomenology of Consciousness Inventory (PCI) was administered in that study. For the instructions + drumming group, direct hits were significantly positively correlated with altered

Hypnosis, meditation, dreaming, and relaxation, insofar as these are primarily passive states, follow the noise-reduction paradigm advocated in parapsychology [...]

time sense, altered perception, and altered experience. Analysis of PCI data revealed that the treatment groups reported what has traditionally been referred to as an "altered state of consciousness," which was not reported in the control group. These findings suggest that phenomenology can be changed using a shamanic-like journeying treatment, and these changes are conducive to the generation of source material that can be an aid to psi processes.

Application to non-parapsychological phenomena and mainstream domains

The ASC that is sought by using the shamanic-like journey protocol, as exemplified in the IC model, bears similarities to the ASCs associated with guided imagery procedures, hypnosis techniques, day-dreaming, dreaming (including lucid dreaming), meditation, other waking but altered states, and even various relaxation techniques. Should there be any advances in psi research using IC, we can expect some level of reciprocation in the form of protocols that maximize expected effects through normal (non-parapsychological) applications of IC techniques, and these may even be of therapeutic use.

Future research and applications

Hypnosis, meditation, dreaming, and relaxation, insofar as these are primarily passive states, follow the noise-reduction paradigm advocated in parapsychology, but there have been no notable increases in psi effect sizes for decades insofar as these techniques have been incorporated into a number of experimental domains, especially ganzfeld (Storm, Tressoldi, & Di Risio, 2010). Although selected participants (e.g., meditation-trained) seem to do better than unselected participants, noise-reduction techniques may have their limits, and it may prove worthwhile conducting IC studies that vary the journeying protocols. For example, evidence suggests that it may be useful to conduct (i) repeated-measures tests with two or more different IC conditions counterbalanced, featuring variable treatment durations and/or differing instructions and/or differing background effects (e.g., drumming vs. meditation music).

Differentiating from other models of psi

Psi-focused hypnosis and dream-ESP, along with psi studies featuring meditation and relaxation, have produced variable results and a number of assumptions (Storm & Rock, 2009a). Although hypnosis is too complex a procedure and not sufficiently understood, dream research, though expensive and time-consuming, did furnish some encouraging results (see Storm et al., 2017). Notwithstanding the perhaps dubious incorporation of the principles inherent in meditation and seemingly appropriate relaxation techniques, the experimental design that came to be called the ganzfeld, is not amongst the easiest to implement, can be costly to set up, and is time-consuming. Added to that, ganzfeld-pioneer Charles Honorton initially proposed the *noise-reduction model* (Honorton, 1974, 1993), and Braud (2002) also endorsed a model of mental quietude, describing the ganzfeld as an ASC similar to that obtained in

meditation (i.e., stillness of mind or cognitive quietude). Ironically, possible sources of noise include "sensory and perceptual noise, bodily and autonomic activity, *mental activities*, . . . [and] *excessive striving to obtain ESP information*" (Alvarado, 1998, p. 44, italics added). Although these might be considered sources of 'noise' under certain circumstances, we would suggest that mental activity and focus are keys to creativity, and may only be psi-inhibitive when they degenerate into states of anxiety and fervor. We reconcile our argument against psi models and theories which propose that psi involves largely passive processes by pointing out that just as many theories and models, involving spirit possession and/or channeling for the purposes of eliciting psi (i.e., clairvoyance, telepathy, and precognition), are not exclusively passive, but nor do they involve modest expenditures of energy on the part of the psi experient. From a procedural perspective, the typical psi percipient is never given the opportunity to engage in a process that we would describe as actively cultivating the fertile ground in which psi might be elicited. To do this, we hold that the percipient must be given special instructions (such as the shamanic-like journeying technique) that foster or encourage psi, by actively creating a suitable environment in which it might emerge.

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Can Morphic Fields Help Explain Telepathy and the Sense of Being Stared At?

| by RUPERT SHELDRAKE, PhD

Introduction

The morphic field hypothesis proposes that minds are systems of fields that are located inside brains but also extend far beyond them, just as the fields of magnets are both within magnets and extend invisibly beyond them, and as the electromagnetic fields of mobile telephones are both within them and extend beyond them.

Minds are extended beyond brains in every act of perception, and the fields of visual perception link the looker to the object that is looked at. Hence something can be affected by looking at it. In animals, human and non-human, the sense of being stared (*scopesthesia*) could well be a result of this process, mediated by perceptual fields, which are kinds of morphic fields.

Morphic fields are fields within and around systems in which the whole is greater than the sum of the parts, including molecules, cells, organs, organisms, and societies of organisms. They contain an inherent memory, given by a process called morphic resonance, namely the influence of similar patterns of activity in self-organizing systems on subsequent similar systems across time and space. This hypothesis predicts, for example, that each species has a kind of collective memory.

If rats ran a new trick in London, for example rats all over the world should be able to learn the same trick quicker. There is already evidence that this happens (Sheldrake, 2009).

In the light of morphic fields, telepathy can be understood as

an interaction between members of social groups within the morphic field of the group as a whole, which interconnects the individual animals (Sheldrake, 2013).

Morphic fields associated with specific intentions could perhaps help in understanding psychokinetic phenomena and remote viewing. But this hypothesis does not provide any immediate explanation for precognition or presentiment.

Intellectual history and ancestry

From the 1964 to 1974, I did research on developmental biology at Cambridge—in particular on the development of plants. I also worked on plants growing under field conditions at an International Agricultural Research Institute in India from 1974 to 1985. But neither my own work nor other research in developmental biology gave an adequate explanation of the development of form. Chemical signals, gene activation, and other molecular processes seemed inadequate. Something more was needed and I was drawn to the long established concept of morphogenetic fields, or form-shaping fields, first proposed in the 1920s. These fields shape the form of developing cells, tissues, organs and organisms. They are within and around the system they are shaping.

Although this concept is widely used by developmental biologists, no one knows what morphogenetic fields are. Most researchers treat them as a descriptive convenience, placeholders for fully mechanistic explanations that have not yet been discovered. I find it more fruitful to think of them as real fields, of a similar degree of reality to magnetic fields, with their own particular properties. These include memories from previous systems that shape the fields themselves. This memory is given by morphic resonance, a connection from past to present systems across space and time on the basis of similarity (Sheldrake, 2009). These fields work by drawing developing systems towards attractors, as described mathematically by the French mathematician René Thom (Thom, 1975).

This hypothesis has many implications for the understanding of biological processes like protein folding, inheritance, collective memory, learning, and memory itself, which on this hypothesis depends on morphic resonance rather than on material traces stored within brains (Sheldrake, 2012).

My interest in psi phenomena arose in the 1980s when I realized that this hypothesis implies that scopesthesia and telepathy should be widespread in the animal kingdom. They are biological phenomena, natural, not supernatural, normal, not paranormal, and probably common to many animal species.

Basic premises and postulates

The basic postulates of the hypothesis of formative causation, the overall name for the hypothesis of morphic fields and morphic resonance, are as follows:

1. Self-organizing systems, including molecules, cells, tissues, organs, organisms, societies and minds are made up of nested hierarchies (*holarchies)* of *holons* or morphic units (Figure 1). At each level the whole is more than the sum of the parts, and these parts themselves are wholes made up of parts.

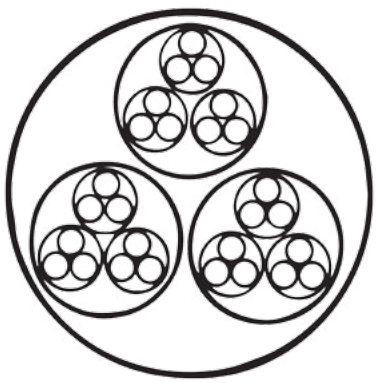

Figure 1. A nested hierarchy or holarchy of morphic units, each organized by a morphic field. These could be subatomic particles in atoms, molecules, and crystals. Or they could be cells, tissues, organs, organisms, and societies of organisms.

2. The wholeness of each level depends on an organizing field, called a *morphic field*. This field is within and around the system it organizes and is a vibratory pattern of activity that interacts with electromagnetic and quantum fields of the system. The generic name morphic field includes
   a. Morphogenetic fields that shape the development of plants and animals.
   b. Perceptual and behavioral fields that organize the perceptions, movements, instincts and learned behavior of animals.
   c. Social fields that link together and coordinate the behavior of social groups such as termite colonies, schools of fish, flocks of birds, packs or herds of animals, and human societies.
   d. Mental fields that underlie mental activities and shape the habits of minds.
3. Morphic fields contain attractors (goals) and *chreodes* (habitual pathways towards those goals) that guide a system toward its end state while maintaining its integrity, stabilizing it against disruptions.
4. Morphic fields are shaped by morphic resonance from all similar past systems, and thus contain a cumulative, collective memory. Morphic resonance depends on similarity and is not attenuated by distance in space or time. Morphic fields are local, within and around the systems they organize, but morphic resonance is non-local.
5. Morphic resonance involves a transfer of form, or in-*form*-ation, rather than a transfer of energy.
6. Morphic fields are fields of probability, like quantum fields, and they work by imposing patterns on otherwise random events in the systems under their influence.
7. All self-organizing systems are influenced by self-resonance from their own past, which plays an essential role in maintaining a holon's identity, continuity and memory (Sheldrake, 2009).

This hypothesis leaves open the question of how morphic resonance actually works. There are several suggestions. One is that the transfer of information occurs through the "implicate order," as proposed by the quantum physicist David Bohm (Sheldrake 2009, Appendix B). The implicate or enfolded order gives rise to the world we can observe, the explicate order, in which things are located in space and time. In the implicate order, according to Bohm, "everything is enfolded into everything" (Bohm, 1980).

Or resonance may pass through the quantum vacuum field, also known as the zero-point energy field, which mediates all quantum and electromagnetic processes (Laszlo, 2007).

Or similar systems might be connected through hidden extra dimensions (there are five in string theory and six in M-theory) (Carr, 2008). It's also possible that morphic resonance depends on new kinds of physics as yet unthought-of.

As applied to the sense of being stared at (scopesthesia), morphic field hypothesis implies that the effects on the subject being stared at depend more on the focusing of attention and intention than on distance. For example, this sense may work just as well over a distance of hundreds of feet as over a few feet if the process of watching is aided by telescopic lenses. It may also work through indirect means, as in television or closed circuit television (CCTV), although more weakly than through direct vision, which establishes a more direct connection (Sheldrake, 2013).

In relation to telepathy, this hypothesis suggests that telepathy will occur primarily between bonded members of social groups rather than between strangers (Sheldrake, 2013).

Telepathy would be expected to occur most effectively between people who are strongly bonded emotionally, like mothers and babies, twins, parents and children, lovers, spouses, and best friends.

The sense of being stared at and telepathy are natural consequences of the hypothesis of morphic fields. Although this hypothesis could perhaps account for clairvoyance, psychokinesis, and precognition, it only does so through chains of additional hypotheses, whereas possible explanations for the sense of being stared at and telepathy emerge naturally and directly from this hypothesis.

Applications

This hypothesis predicts that animals might be able to detect through their own perceptual fields when the perceptual fields of other animals are brought to bear upon them, even if they cannot see, hear, or smell the animal watching them. This field sensitivity may not be consciously perceived and may be part of a background unconscious awareness.

In the course of evolution, a greater awareness of being observed may have been of adaptive value, especially to a prey animal sensing when it is being watched by a potential predator. This ability could have become widespread within the animal kingdom. It could also be expected to be widespread among human beings, and indeed surveys show that over 90% of the population, including children and even people in industrial countries, have reported the experience of being watched from behind or of watching other people who then turn around. There is now good empirical evidence that people can indeed tell, at levels very significantly above chance, when they are being stared at from behind. This ability can also be detected through CCTV through physiological changes in galvanic skin response, which are unconscious (Sheldrake, 2005).

The morphic field approach to telepathy predicts that it is widespread among animals and may enable members of social groups to communicate at a distance. Animals such as pet dogs, cats and parrots that bond with humans will pick up their owners' intentions telepathically, including their intentions to return home. There is now good evidence that dogs know when their owners are coming home even when they are miles away, when they return at randomly selected times, and when they travel in unfamiliar vehicles. The pets seem to detect their owners' intentions telepathically. This hypothesis also predicts that these effects will occur only between animals and people with whom they are strongly bonded, in agreement with the facts (Sheldrake, 2011).

The same principles apply to humans. Telepathy would be expected to occur most effectively between people who are strongly bonded emotionally, like mothers and babies, twins, parents and children, lovers, spouses, and best friends. This indeed seems to be the case, both in spontaneous cases of telepathy and in experimental investigations (Sheldrake, 2013).

Other examples of documents, supportive evidence

There is now much evidence for the sense of being stared at and for telepathy in animals and people, as summarized in my books *Dogs That Know When Their Owners Are Coming Home, And Other Unexplained Powers of Animals* (second edition, 2011) and *The Sense Of Being Stared At, And Other Unexplained*

Powers Of Human Minds (second edition, 2013).

Application to non-parapsychological phenomena and mainstream domains

The hypothesis of morphic fields was primarily developed in relation to chemistry, biology, psychology and social organization. It is primarily about "normal" non-psi phenomena.

Another application of this hypothesis is a new approach to animal navigation. I discuss the question of how animals navigate remains largely unsolved in my book *Seven Experiments That Could Change The World* (Sheldrake, 2002). The most detailed experiments are on homing pigeons. Pigeons can find their home from hundreds of miles away from unfamiliar places. Racing pigeons can return from 600 miles away in about 10 hours, an average speed of 60 mph. They do not search at random; they know where to go. Attempts to explain this phenomenon in terms of a sun compass, memorizing the outward journey, inertial navigation, and the sense of smell have all failed. Some researchers speculate that a magnetic sense could explain navigation, and some migrating animals do indeed seem able to detect the earth's magnetic field. Although a compass sense may help an animal stay on course, it cannot possibly explain navigation itself. Imagine that you parachute into an unknown place and are given a compass. You would immediately know where north was, but this would not tell you where home was. A compass sense could help you if you knew where home was by some other means, but would not help if you did not have a map or some other source of directional information.

My own hypothesis is that pigeons are linked to their homes by morphic fields, built up through familiarity with their home and surrounding area. The pigeons, when taken away from home, remain connected with it through these fields, which give a sense of direction. A crude mechanical analogy is to think of the pigeons as joined to their home by a kind of invisible elastic band. Through this field connection, they feel a pull toward their destination. Attempts to explain navigation without this sense might illuminate some details of the animals' sensory processes, but there is no explanation for the sense of direction itself.

Thus morphic fields might help to solve the mystery of animal navigation. One way of testing this hypothesis is to use a mobile pigeon loft, in which the home is moved from the pigeons rather than the pigeons from the home. I have conducted several experiments with mobile pigeon lofts that have yielded very promising results. In the most recent test, a pigeon loft was mounted on a ship belonging to the Royal Dutch Navy and moved 6,000 miles from Holland to the Caribbean and back again. Pigeons were able to find their home on the moving ship from substantial distances—in one case from 300 miles away over the Atlantic Ocean (Sheldrake, 2002, Appendix).

Future research and applications

1. Experimental tests of scopesthesia in non-human animals. For example, if prey animals, e.g., mice, are placed in a cage and filmed continuously, do they behave differently when they are being watched by a cat behind a one-way mirror, compared with when the cat is prevented from watching them by interposing a barrier between the cat and the mirror? Experiments of this type would open up the possibility of an extended natural history of scopesthesia both through laboratory experiments and observations of wild animals. Such experiments would not

Several models of psi start from physics, in particular quantum physics, whereas the morphic field model starts from a holistic approach to nature [...]

necessarily confirm the details of the morphic field/extended mind hypothesis, but they would ground the phenomenon more firmly in biology and natural history, whatever the preferred explanation.

2. Experiments on animal telepathy could help to normalize telepathy as a biological phenomenon within social groups. For example, do wolf cubs, when filmed by a miniature camera in their den, show signs of anticipation before their parents return from a hunting trip with food? Is the behavior of wild animals analogous to dogs that know when their owners are coming home?
3. Morphic fields of social groups may help to coordinate flocks of birds and schools of fish, which can rapidly change direction without the individuals bumping into each other. These field-like phenomena occur when the individuals are very close to each other, but experiments on separating schools of fish or flocks of birds into subgroups could reveal whether this coordination to some extent remains at a distance. Similar experiments could be carried out with ant and termite colonies, which may also be coordinated by morphic fields (Sheldrake, 2002, Chapter 3). These phenomena may differ in degree, but not in kind, from telepathy at a distance.
4. In the Appendix to the third edition of my book *A New Science of Life* (called *Morphic Resonance* in the United States) I suggest ten new tests for morphic resonance in the realms of physics, chemistry, biology, psychology, and analogue computing (Sheldrake 2009). If any of these tests support the hypothesis of morphic resonance they would indirectly support the morphic field hypothesis of psi phenomena.
5. Further experiments with homing pigeons are needed to find out whether pigeons can indeed find a home that moves, taking further the preliminary experiments from my own research with the Royal Dutch Navy. Such experiments would be best carried out at sea. Support for the morphic field hypothesis of animal navigation would indirectly support the morphic field hypothesis of psi phenomena.
6. The evolutionary and biological basis of telepathy is probably rooted in the communication of needs or alarms at a distance. Telepathic communication between babies and their mothers seems to occur quite commonly (Sheldrake, 2013), and further research on mother-baby telepathy could help ground human telepathy in a biological and evolutionary context. Similar research on telepathy between lactating mammals of other species and their babies would widen this topic and deepen our biological understanding.

Differentiating from other models of psi

Several models of psi start from physics, in particular quantum physics, whereas the morphic field model starts from a holistic approach to nature that does not seek to explain everything in terms of smaller systems, and ultimately in terms of the smallest of all systems, namely

quantum processes. The morphic field approach also differs radically from the generalized quantum theory model, which is based on non-local correlations rather than causal connections (Walach et al., 2014). The sense of being stared at arises as a response to being stared at: staring is a cause, and detecting it is an effect. Likewise, telepathy is causal: a distressed baby causes its mother's telepathic response.

Nevertheless, the approach to telepathy in terms of morphic fields is similar to Dean Radin's hypothesis of entangled minds, taking quantum entanglement or non-locality as a model that can be applied at systems at much higher levels of complexity (Radin, 2006). In common with the entangled minds model, the morphic field hypothesis predicts that organisms that have been part of the same social system from the past, part of a bonded group, will remain connected at a distance. This hypothesis also predicts that the connections will not fall off with distance, in agreement with many observations on telepathy.

The morphic field hypothesis also differs from "one mind" approaches that treat psi phenomena as aspects of an ultimately unifying mind underlying all things (Dossey, 2014). The morphic field approach does not necessarily depend on a kind of ultimate mind at a higher level, but rather on fields of connection between animals and what they are watching, and also connections between members of social groups.

This hypothesis also differs from physics-based approaches designed to account for precognition and presentiment in terms of causal influences "backward" in time. The morphic field hypothesis has little to say about precognition and presentiment. Morphic fields may be complementary to time-reversal hypotheses.

The morphic field model differs from James Carpenter's first-sight model of psi in its emphasis. The first sight model deals with unconscious mental processing that is scanning inputs, including psi inputs, which are at first preconscious (Carpenter, 2012). It is a psychological model rather than a model of the extended mind or of social fields. But these two approaches seem compatible. Morphic fields and the extended mind would influence first sight.

Further reading

My book *A New Science of Life* (third edition 2009, called *Morphic Resonance* in the US) outlines the hypothesis of formative causation through morphic fields and morphic resonance, reviews evidence from 25 years of research, and proposes ten new tests for morphic resonance. The fullest statement of the hypothesis of formative causation and its application to collective memory, individual memory and cultural inheritance is in my book *The Presence of the Past: Morphic Resonance and the Habits of Nature* (second edition, 2012).

Research on telepathy in animals, as well as animal premonitions and the sense of direction is summarized in my book *Dogs That Know When Their Owners Are Coming Home, and Other Unexplained Powers of Animals* (second edition, 2011).

The extended mind hypothesis and a discussion of human telepathy is summarized in my book *The Sense of Being Stared At and Other Unexplained Aspects of Human Minds* (second edition, 2013).

The empirical evidence for scopesthesia and its theoretical implications were the subject of a special issue of the *Journal of Consciousness Studies* (Vol. 12, No. 6, 2005) in which I wrote two target articles and a response to 14 other articles and comments by other researchers, including skeptics.

I have also published many experimental papers on the sense of being stared at and on animal and human telepathy and which are all available online through my website:

The morphic field model differs from James Carpenter's first-sight model of psi in its emphasis. The first sight model deals with unconscious mental processing that is scanning inputs, including psi inputs, which are at first preconscious

Papers on stare detection: https://www.sheldrake.org/research/sense-of-being-stared-at

Papers on telepathy in non-human animals: https://www.sheldrake.org/research/animal-powers

Papers on telepathy in humans: https://www.sheldrake.org/research/telepathy

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First Sight:

A Model and a Theory of Psi

| *by JAMES C. CARPENTER*

Introduction

I divide *first sight theory* (FST) into a general model of how the mind works, and a set of theoretical ideas about how unconscious potentialities (including ones beyond the present sensory bounds of the person) emerge, or fail to emerge, into experience and action.

The model says all organisms engage with potential realities far beyond the sensory ken all the time on an unconscious level of psychological functioning. This doesn't imply that we somehow "know" all these things or are somehow "doing" all of them. These are potentialities, and our consciousness-based language cannot clearly represent them. We can only know about what becomes of them in experience and action. In fact, all of our experience and action emerge out of this pre-sensory ground. Since so much of this ground is beyond us in a sensory way (is psi), psi is seen as the initial element in this perpetual becoming. It is "first sight." This ground also includes elements that are particular to the individual, for example, there are nascent concerns, memories, wishes, and intentions. These elements can be seen to emerge in different forms, at different times, in all of a person's experience and behavior—like our attunement to certain kinds of things, or our longing for certain kinds of things. They characterize us as individuals. They are powerful and personal, while also being unconscious.

If the expression of psi is seen in the experience of a person, this is called ESP or precognition. If it is seen in the unconscious behavior or psychophysiological response of the organism, we call it implicit psi, or presentiment. If it is in the

Outside of parapsychology, some major influences on first sight theory have been the phenomenology of Husserl and Heidegger [...]

behavior of things outside the person's normal sphere of influence, it is called PK or RSPK, or perhaps psychic healing (or harming).

Intellectual history and ancestry

I think I have been working on it implicitly as long as I have been involved in parapsychological research. In the 1960s I did research on the effect of anxiety on scoring direction, and I also did a series of studies modeled after subliminal perception studies of the time, thinking of psi targets as primes. Much later, I saw the need to develop a theory to guide our work and tie it together and connect it to mainstream psychology. I remember proposing to a group of colleagues that we should have a Manhattan Project on psi, and try to nail down how it works. This became my contribution to that effort. I think I am spelling out a good starting picture about how it works.

Of course, I had wonderful colleagues close at hand to gather insights: J. B. Rhine insisted that psi must be understood psychologically; Gaither Pratt knew that most of its working was implicit; K. R. Rao pointed out that it is always bidirectional; Gertrude Schmeidler showed that it worked a lot like subliminal perception and followed meaningful patterns in other areas of psychology; Chuck Honorton led us to important inner states; and Rex Stanford made clear that psi worked implicitly in everyday life as well as in the laboratory, and that psi often conformed to the needs of the individual.

Outside of parapsychology, some major influences on first sight theory have been the phenomenology of Husserl and Heidegger, the unconscious psychodynamics of Freud and Sullivan, and later neo-analytic approaches such as those of Medard Boss, Joseph Weiss, and Fritz Perls. In experimental psychology, the work of Seymour Epstein, Harold McCurdy, Robert Bornstein, John Bargh, Ap Disksterhuis, Norbert Schwartz, Harold Shevrin, David McLelland and Joel Weinberger has been especially inspirational.

Basic premises and postulates

First sight theory outlines a fairly extensive set of considerations that are important in understanding and predicting how unconscious pre-information finds its way into expression as experience and behavior. Some important elements include the following:

- Expression is either positive (included in expression) or negative (excluded from expression) – this is called *direction.*
- Whether positive or negative, expressions may be relatively strong or weak – this is called *extremity.*
- Non-sensory potential material may be seen to be expressed in either direction, and to any degree of extremity, both in experimental results, and in everyday life.
- Understanding and predicting *direction* and *extremity* of psi expression are the major tasks for a theory of psi.
- In the most general terms, the main determiner of *direction* is unconscious intention, in the context of the situation as apprehended unconsciously. The

main determiner of *extremity* is the consistency of unconscious intention, in the context of the situation as apprehended.

- Variables that will help to understand quality and degree of expression of psi include typical and momentary characteristics of the person, characteristics of the potential information at stake, and characteristics of the situation in which the person may express the information. Several important aspects of each of these classes are spelled out in the theory (for example, the importance of fear, and security of mood, and attitude of openness, and situational danger, and the anticipated consequences of knowing or expressing something). Being able to adequately characterize the person- situation- information will help to understand and predict the direction of the individual's unconscious intention at the moment, and know something about how consistent this direction of intention is likely to be. Knowing this, one can predict what sort of psi expression will emerge in experience or behavior.
- All of this processing is unconscious. Expressions of psi are always inadvertent. Experiences and behaviors may imply potential knowledge or action, but they are never knowledge or action as such.
- In most everyday life, psi is not expressed strongly. We inherit a sensory system that has evolved to handle immediate situations with remarkable finesse. The expression of psi is always inadvertent, never straightforward to decipher, whereas sensory knowledge and consciously deliberate action are readily available to awareness. Implicit knowledge beyond the immediate situation is usually not sensed to be pertinent enough to overcome the business-as-usual of the sensory system to be expressed. This is why psi does not seem to exist.

Specific predictions and laws

Predicting psi expression sounds more complicated than it really is. Think about your own conscious behavior; it is a good model for understanding unconscious behavior. There are a host of considerations that enter into your choices, some having to do with what is being chosen, some with the situation, some with your characteristic preferences, some with how much the preference matters either way, in general or specifically at that moment. You sort through all of this quickly and efficiently, as all your little decisions flow on in daily life. According to FST, the same thing goes on at an unconscious level when the mind "decides" to engage some extrasensory potential either positively or negatively, either in a decisive way or an indifferent way. And FST says that psi is involved in each of those little choices, in a basic, initiating, unconscious way. It is first sight.

Much research in mainstream psychology deals with similar issues in regard to how "normal" experience and behavior arise within the sensory sphere. Examples include the emergence of nascent memories or creative solutions, subliminal perception, the cognitive effects of fear and anxiety, and the cognitive and interpersonal consequences of openness, mood, and extraversion. All of this work touches on patterns in how potential experience and behavior emerge into expression. In my theorizing, I assume that patterns found in this work will likely obtain in important ways to the expression of psi. We can speed our progress by mining mainstream work and applying it to our own studies.

All of this implies that First Sight is an ambitious theory. It tries to

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build a framework for understanding how potential expression becomes overt expression, behavioral or experiential, sensory or extrasensory, when effects will be on ourselves, when they will be on the world around us. It tries to account for when expressions are as-such, and when they are subverted into their opposites. It tries to account for strong expressions of potential experience, or weak expressions, or absence of expression. It wants to cover the "normal" and the "paranormal" in the same terms. The theory also implies that psi is a normal, continuous process for all people, almost entirely unconscious in its functioning. The population is not divided into "psychics" and "normals." The function of research changes with this approach. We no longer try to evoke and catch a rare "ability" in action. We try to discern an ongoing, extrasomatic process that is at work all the time in everybody.

Applications

Let me give two examples that are rather different, and show what different directions can follow from the theory.

In the first, some colleagues and I set up a standard test of the mere -exposure effect, a subliminal task in which people are exposed to pictures too quickly to be consciously perceived, and then later shown those pictures alongside unexposed pictures rated as equally likable. In each pair, they were asked to pick the one they preferred. Along with the subliminal exposures, we had another set of pictures that were completely blocked from view by a big, black rectangle (analogous to putting a picture inside an opaque envelope), and these were also briefly exposed, and then paired with control pictures, and preference measures were collected. We looked at a set of variables that FST predicted should influence the direction of implicit ESP response, including mood, openness to internal information, tolerance for boundary merger, and anxiety. We also assessed some dimensions that former research suggested would predict subliminal ME. We confirmed almost all the predicted relationships with psi. Then in a confirmatory study, we found a strong confirmation the first sight assumption that ESP information acts like a subliminal prime was validated, and the relationships specified by theory to be important were, in fact, found to be.

The second example is a study that also tested the assumption that psi functions like a subliminal prime, and implicitly influences spontaneous behavior all the time. A group of friends met together in over 600 sessions of spontaneous interaction. While we were meeting, a computer was randomly selecting two numbers. One picked an envelope out of a set of 100, the second picked one of the four pictures inside that envelope as that day's ESP target. We hoped that the target could function as an extrasensory prime, and be expressed implicitly in the day's interaction. After each session, the group examined the four pictures in the envelope (without any information about which was the target) and ranked and rated all of them in terms of their degree of correspondence with the session. We were able to correctly identify the target to a strongly significant degree. Before the pictures were exposed, all members also rated the quality of the session on a

number of dimensions, such as degree of spontaneity, hurtfulness, and depth of personal revealing. The relationships found with the group's scoring made good sense in terms of first sight. Sessions that were especially intense, with much deep revelation, were associated with chance scoring. Sessions that were lighter and more playful, showed strong hitting. First sight would predict that the mind should move away from extraneous ESP targets when something intensely important needs to be focused on, whereas it should be free to range to extrasensory information when the situation is more unfocused and spontaneous.

Other examples of documents, supportive evidence

I think it's fair to say that a great deal our published parapsychological literature supports my model, although you have to look through the lens of the theory to see it. In *First Sight,* I look at four major areas of research involving memory, anxiety, creativity and extraversion. For a small field, we have accumulated a fairly large number of studies in those areas. Lots of relationships have been reported, very many of them are significant, a fair number of them seem inconsistent with each other, and most of them are very lightly interpreted, if at all. I try to show that first sight theory can interpret these findings and resolve a lot of the apparent contradictions.

Regarding memory and ESP, both positive and negative relationships were found. First sight says that if someone is doing cognitive work, this should hold psi influence at bay, and turn it negative, whereas an unfocussed inner searching should permit its positive expression. In psi/memory studies, experimenters often failed to distinguish between working memory (which requires ongoing cognitive work), and long-term memory, which works best with an open-minded inner search. When I divided studies into those two kinds of memory, sure enough, correlations with working memory tended to be negative, and those with long term or procedural memory tended to be positive.

Somewhat similarly, some measures purported to represent creativity require strong, almost acrobatic cognitive work, such as those that ask people to generate different uses for a brick in a short time. Other definitions of creativity are more face-valid, as by determining whether or not an individual is engaged in producing works of art that are of high quality. Producing a good painting or composing fine music according to FST should function more like psi, and correlations with that definition are positive. The correlations with the measures involving more cognitive work tend to be negative.

Negative relationships have usually been reported between positive expression of psi and the anxiety, or fear of the individual (or the fear-arousing potential of the psi target). However, there have been important exceptions. I consulted the literature on similar effects when stimuli are sensorially available but subliminal. There, it is clear that if the response measured requires conscious awareness of the target, fear is a negative influence. However, if the response is unconscious or implicit, fear actually facilitates a rapid response. I divided the psi studies accordingly. When studies required a conscious response (guessing a card, say), fear diminished performance. However, when an implicit response was measured, such as physiological arousal, or a choice with unknown implications for some outcome, more fear heightened the response.

Lots of studies have reported that extraverts score better than introverts in psi tasks, but almost no one has tried to explain what this might mean—and exceptions

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have been reported here too, with introverts doing better. FST would ask what different unconscious intentions might characterize these groups. I consulted the mainstream literature to see what is generally accepted about this. It boils down to what people tend to like and respond best to. Some people enjoy groups and are intensely motivated to gain the approval of groups—they love applause! We call them extraverts. Some other people are uncomfortable or exhausted by groups larger than two or three people and do not find group approval to be especially desirable. These are introverts. So, the kind of situation is important in predicting when these sorts of people will behave differently. I took all the parapsychological studies that looked at psi in relation to this dimension of personality, and divided them into group situations in which individual feedback (and applause) was possible, and those in which it was not. The positive relationship came through consistently in situations that permitted a response to the quality of performance. This brought out the best in extraverts, less so in introverts. Some other studies set up very comfortable, intimate situations expected to be very conducive for introverts, not so interesting for extraverts. Here the introverts did better. There are some other tendencies that are associated with this dimension too, for examples, extraverts crave change and new things to interest them more than introverts do. They bore more easily. Because of this, I expected that Bem's studies involving implicit precognitive response should work best with extraverts who bore quickly because his tasks asked participants to anticipate new situations (implicitly expressing an interest in what is around the corner) and permitted an appreciative response from the experimenter. In fact, these Ps carried the brunt of several of Bem's effects.

Application to non-parapsychological phenomena and mainstream domains

This model can be applied to any area of mainstream psychology that is involved with the problem of how experience and behavior arise out of a pre-conscious base. Some of its assumptions would add helpfully to ongoing work. For example, it would be a boon for those working on subliminal perception, implicit cognition, creativity, and so on, to understand that all preconscious response is bidirectional. Memory can go backwards, and suppress accurate recall, artistic choices can be disastrously wrong, subliminal response can swing into negative directions that are as strong as the positive ones the experimenters are hoping for. Psychologists have no way of thinking about such negative response, don't talk much about it, and probably suffer from that by having effects that are less reliable than they could be. Even parapsychologists still are troubled by psi-missing, but it is one basic expression of psi and we should be clear-minded about it. FST gives a clear way to work with such negative response.

If we turn to the vast world of normal phenomena, FST really has countless potential implications. We are continuously emergent beings, with continuously emergent lives, and FST tries to spell out some lawfulness to all of that. I think it can offer some

overarching coherence to trying to understand many different domains of experience. I have lived with FST so long, that I see through its lenses all the time. It helps me understand my own choices and behaviors a bit better, and especially helps to make sense of those occasional psychic sparks in which something future or something distant pops up into a dream, or into the unwitting expressions of a psychotherapy patient or a friend. I would like some other people to live with FST this way, too, and "try it out" on daily life to see if it seems to make otherwise senseless events more sensible.

Future research and applications

We can keep up with the research we are already doing, but sharpen its expectations using the framework and specific predictions of the theory. It's a crude beginning now, but the more we learn about psi the more we can refine the model and correct it. It offers a framework in which our work can be more programmatic (and more programmatic work ultimately is going to be more productive). We should work on trying to operationalize and predict unconscious intention, salient aspects of persons and situations, and situations and personal characteristics that make for more and less consistent intention at both a conscious and unconscious level. And we should work cooperatively with other scientists who are studying the pre-conscious base of experience and behavior.

Differentiating from other models of psi

First sight is psychological, whereas most theories of psi nowadays are physical. These will address different kinds of questions. Physical theories try to understand how precognition or psychokinesis, for example, might be more sensible in light of certain ways of understanding nature in general, physical terms. This is deeply interesting to all of us, but it also feels like a primary concern for those who think we need the "permission" of physics to consider our phenomena real at all, and therefore worthy of study. We have actually gotten along alright without that permission so far, and made some progress, so this logic does not feel compelling to me.

The other major psychological theorizing about psi that I know of, that of Schmeidler and Honorton and Rao and Stanford, that I already mentioned, is all pretty compatible with FST. But FST is broader, tries to cover more, including all of those experiences and behaviors that are apparently non-psychic, and it is also more specific in certain ways, such as in spelling out how personal proclivities in perceptual style or emotional tone might be expected to predict how one unconsciously engages and expresses psi potential information.

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