

Can we differentiate between ESP and Imagination?

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Abstract

One enduring problem in extrasensory perception (ESP) research lies in determining which aspects of a percipient's mentation might relate to the target, and which are not relevant. Perhaps this is a false dichotomy and ESP is instead "imagination that relates to the target", an extension of a continuous process wherein our internal state is perturbed by a multitude of external forces but one where we have been able to extract useful information from those perturbations. These perturbations will not be strong else they would be directly perceived, but instead enter into conscious awareness as subtle alterations to 'normal' thought processes. This may manifest as a sense of unease or awareness of difference, or, as occurs with weak or indirect sensory information, in a symbolic form. ESP can then be envisioned not as a single "sense" but instead as a symbolic unification of a stream of weak and indirect information from a variety of sources.

imagination: 1. the faculty or action of producing ideas, especially mental images, of what is not present or has not been experienced. 2. mental creative ability.

extrasensory perception: the supposed ability of certain individuals to obtain information about the environment without the use of normal sensory channels.

--- Collins Dictionary of the English Language, 1986 edition.

One enduring problem in ESP research is determining which aspects of a percipient's mentation relate to the target, and which are irrelevant. In short, how can we differentiate between ESP and imagination?

Consider for a moment that this may be a false dichotomy, that ESP is actually a part of imagination and not something separate at all. What we really mean by ESP is "imagination that relates to the target". Some might now assume that I have declared myself in agreement with the sceptics, saying that people who have psychic experiences are merely deluded daydreamers. In fact, nothing could be further from my mind. What I am suggesting is the antithesis of this: that daydreamers are perhaps undisciplined psychics!

To explain this, we first need to look at what is understood by the term "imagination". The concept of the imagination, then called "phantasia", seems to have been first introduced into philosophy by Aristotle (Thomas, 2001). He thought that imagination was the process by which we say that an image is presented to us, having a role to play in all forms of thinking, not just with inventiveness or creativity. Furthermore, he saw it as one half of a single faculty, the other half being the *sensus communis* (the 'common sense') which was responsible for binding together all the inputs from the senses into a coherent whole. Essentially, mental representation of an object directly before us was *sensus communis*, whereas phantasia or imagination was

the mental representation of something not physically present.

In later years, Descartes identified both the common sense and the imagination with the surface of the pineal gland, the place where images of both the senses and memory were inscribed. The joint common sense/imagination faculty mediated between the external world and the mind/soul. Possibly because of this, subsequent thinkers tended to subsume the idea of 'common sense' and phantasia under the general term "imagination" and focussed primarily on it as being the generation, from whatever source, of mental images.

Today, imagination and imagery in general is not seen as being a primary faculty but instead, as the dictionary definition above indicates, simply as the ability to think about things that are not present or which have not been experienced. The former is an aspect of memory, the latter an essential but not yet understood part of creativity. When we talk about imagination in common usage, we are usually referring to the creative aspect.

While memory is not completely understood, there is a fair amount of consensus on the basic mechanisms that allow it to function. Although it undoubtedly has a role to play in ESP experiences (Blackmore, 1980), this may have no more explanatory value than does the statement that memory plays a role in most human activities; it does not have any obvious application in understanding ESP itself. Creativity, on the other hand, is much less understood but, according to parapsychological research (Dalton, 1997), might be intimately involved with ESP.

The source of creativity

"Random processes are an inexhaustible source of new information in the form of options and alternatives."

--- Roger Ball (1999).

There has long been a debate in mainstream psychology as to the source of creativity and the creative imagination. One approach relates creativity to the level of randomness within an individual (Treisman and Faulkner, 1987). Essentially, the creative higher thought processes need an injection of something unpredictable before they can generate a novel idea. Some theorists think that it is all purely cognitive (Feldman, 1999), that we learn how to be creative by observing things that other people consider to exhibit creativity. They are proposing the existence of 'creativity algorithms', analogous to the deterministic programs used by computers to produce apparently random numbers. Others think that within each of us is a biological source of randomness (Martindale, 1999), perhaps a group of neurons in the brain which are accessed by other parts of the brain when a given behaviour would benefit from original input. Cognitive processes would still play a role, but the essential randomness exists apart.

The problem with either approach is apparent. The former denies any chance for free-will, as everything within us would be deterministic. It also means that what we call creative is ultimately unoriginal, a rehashing of old ideas in new patterns, which then brings up the question of how those ideas were created in the first place! However, there is a problem with the latter in that there are few potential biological mechanisms for making use of internal randomness. While we know that all physical systems, biological or otherwise, do exhibit true random noise (for example, neurons show a random firing action due to thermal and quantum noise), most biological systems have evolved so as to reduce the effects of such internal noise (e.g.

redundancy, neural networks, fuzzy logic).

However, we need to consider what we actually mean by "random" in this context. I mentioned "true" randomness above, this being the term applied to randomness based on subatomic processes that current theory tells us are inherently random, but is this actually required as the basis for creative processes? Bennet (1998) defines random to mean 'unpredictability by a small

set of simple rules'. From a creativity viewpoint, this would require unpredictability by the rules inherent in the creative system i.e. from the viewpoint of the creative person. That is, there would only need to be some source of influence which was not based on the existent processes within that person and so which were unpredictable *based on that person's current knowledge*. So maybe an alternative model would be to look outside of the body for a source of unpredictability: perhaps external influences perturb internal processes away from their algorithmic paths, forming new patterns which we call creativity when it is applied, or imagination when it is undirected. The influences may in fact contain information from a variety of sources all mixed together but, in the absence of knowledge about these potential signals, the appearance will be one of randomness.

To demonstrate what I mean, picture in your mind a person sitting in school, staring out of the window but lost in her own thoughts. There will be sounds from all around that she is barely aware of: pages turning, people fidgeting in seats, the sounds of radiators gurgling, of overhead lights humming, traffic in the distance, a fly buzzing against a window, and so on. All of these sounds are being received by her auditory system, activating electrical impulses in specialised neurons and causing changes in her ongoing brain activity. She might find that these sounds become incorporated into her daydream without any effort on her part. But this is just due to sounds: think about the variety of possible influences that could be acting on her. There will be changes in light levels, shadows from the people around her and events outside. There will be fluctuations in heat from draughts and sunlight. The bones in her legs and arms will pick up vibrations from the floor and through her desk. She is also immersed in electrical and magnetic fields from the wiring, the fluorescent lights, her wristwatch and from the natural background field of the Earth. She will even be bathed in cosmic radiation from the Sun and other sources. All of these stimuli will on some level be interacting with different parts of her body, and causing input to her brain. Without her being aware of them, the girl is immersed in a constant barrage of information about her environment. While most people would agree that she is unlikely to be able to become directly aware of the majority of this potential information, it seems infeasible to suggest that she will be unaffected by it. Just as the sounds became incorporated into the daydream, perhaps the other information will have been too. Unless some effort was made to monitor these outside sources of influence, we would probably never know.

ESP, Creativity and Randomness

"...the educated guess or the hunch include controlled randomness
in otherwise orderly thinking."

--- McCarthy, Minsky, Rochester, and Shannon (1955)

Now this is really what we are doing when we study ESP. We try to observe an individual's mentation (their mental imagery), either by asking them to select from a set of fixed symbols or more directly by asking them to try to verbally describe it.

We then match that observation to a known external source (the target, the sender, etc.).

But the same mentation, if produced in a non-ESP setting, would normally be called 'imagination'. Anecdotal reports of ESP often show that some experiences were not thought to be significant at the time but were later categorised as ESP when they were found to closely match external events, with the proviso that the percipient could not have been aware of the events through normal, sensory means (but then again, what is perception but imagination that corresponds to local events in real time?). It appears that imagination and ESP are primarily differentiated by their correspondence to external events. Or perhaps it would be more accurate to say their known correspondence.

If this is true, then we begin to see the place of ESP in the continuum of experience. It becomes an extension of a continuous process wherein our internal state is perturbed by a multitude of external forces, but one where we have been able to extract useful information from those perturbations. This approach has some similarities to Rex Stanford's (1990) psi-mediated conformational behaviour model, which suggested that an organism makes use of psi to produce adaptive responses to circumstances in its environment, the strength of these responses being related to the needs of the organism. By introducing a needs-based or goal-oriented view (i.e. psi acts unconsciously in accordance with conscious goals), Stanford avoided the problem of the organism "drowning in psi-mediated information", a factor in his earlier Psi Mediated Instrumental Response (PMIR) model that had worried him. The concept of ESP that I am promoting in this paper is in many ways more similar to the PMIR model in that the organism is indeed flooded with information. However, I am not suggesting that this information is mediated by a single psi channel but instead is a more global process wherein a range of influences affect a range of processes within the organism. The only 'central information processing' on the part of the organism is the final synthesis of meaning from the overall pattern of perturbed internal processes. There is no element wherein the organism can be said to be scanning its environment, nor do needs or goals necessarily play a part in what information may be gained. The information is simply there as the organism is passively perturbed by its environment.

So how might this have come about? It has become apparent that evolutionary processes are very good at selecting for changes in organisms that allow them to make use of information from their environment, especially when that information relates to that organism's survival. We might imagine that an organism which had prior warning of severe weather, perhaps by being sensitive to changes in atmospheric electric fields, could stockpile supplies and take shelter, thus surviving the storm and engendering descendants with the same or better sensitivity. It seems unlikely that the organism would be directly aware of the subtle changes in the electrical fields (that is, it would not have a dedicated sense organ for this purpose) but might on some level learn to recognise the type of changes in its body that resulted – an idea supported by bioelectromagnetics research (e.g. Bell, Marino and Chesson, 1992). It has even been suggested (Smith and Best, 1990) that the rhythms of electrical activity which are found in the brain of all animals have the frequencies they do due to millions of years of evolution within the pulsations of the Earth's electrical environment.

How would we experience this?

If ESP is indeed a form of "externally-correlated imagination", then we might

gain insight by looking at a mental state that we know has a high imaginative component: dreaming. Although in such a state the conventional sensory channels are supposedly shut down, external stimuli do still impinge upon the dreaming individual albeit in a less direct manner. For example, Nielsen (1993) showed that stimulation of parts of the sleeper's body was frequently incorporated into dream content, but that this manifested indirectly as an increase in the bizarreness of themes relating to the body.

Hubbard (1994) describes theories from dream research that suggest that the brain is somehow able to make sense out of random patterns of activation, creatively constructing as coherent and plausible a dream narrative as is possible. If, as I am suggesting, ESP ultimately arises from external stimuli causing seemingly random changes to ongoing mental processes, then the dream theories would suggest a similar ESP narrative should arise. So what are the qualities of this narrative?

States (2000) suggests that the process is one of association, which is expressed primarily in visual imagery, and that the normal waking considerations of efficiency and logic are only thematically relevant. That is, external stimuli are interpreted symbolically. Research showing that dream content exhibited indirect associations with applied stimuli has backed this up. Sometimes this is simple - research by Berger (1963) found that verbal stimuli produce dream symbols that have a rhyming association - and sometimes more complicated, relating to personal symbology. In general, symbolism seems the way in which our brains/minds interpret indirect or weak sensory impressions. So, perhaps we could say that imagination in part evolved as a symbolic language linking the individual to its environment. ESP is a subset of this, where the link is verifiable. If so, then we may have to start looking at ESP not as a single sense but instead as a symbolic unification of a stream of weak or indirect information from a variety of sources.

So we might expect that ESP would be interpreted symbolically, with indirect associations between the target and the ESP experience. Sometimes these symbols would be simple, such as a rhyming association, and sometimes more complicated, relating to personal symbology. We might also find that ESP would be opportunistic, with the percipient getting information from as many sources as existed at a given time. The percipient themselves might not even be able to completely distinguish between normal and paranormal sources of information. If so, we would have to reconsider the strategy of trying to determine whether a psychic is "really paranormal" or whether they make use of techniques such as cold reading. Instead, ESP would be the name we give to the way paranormal and conventional techniques blend together to give a coherent stream of information.

The Evidence

In my mind, the most convincing evidence is the intimate relationship between imagination and ESP. ESP is distinguishable from imagination only by the fact of verification. ESP is also commonly reported during dreaming (Ullman & Krippner, 1973), one of the most imaginative states of which we know. There are also hints about the idea that ESP would be interpreted symbolically. For example, Louisa Rhine (1953) reports on the highly subjective nature of psi experiences in spontaneous cases.

Secondly, there is some suggestive evidence from experimental work. A pilot study I conducted (Stevens, 2001b) suggested that extremely weak magnetic fields

alter the inherent randomness in people's brains by an average of 5%. This is now being expanded into a larger study that will look at individuals' baseline randomness and how responsive this is to outside influence, and then compare this to their performance on an ESP task. Another study (Stevens, 2001a) found that similar magnetic fields could subtly alter the way people experienced emotions associated with visual images. There is also some research showing links between imaginative experiences and external physical factors, such as one by Randall and Randall (1991) showing a correlation between spontaneous hallucinations¹ and solar wind activity, and another by Ertel (1997) which found correlations between solar activity cycles and episodes of general creativity in a variety of human cultures.

Indirect evidence includes the apparent relationship between ESP success and the activity of the Earth's magnetic field (e.g. Dalton and Stevens, 1996), which may go some way to explaining the inconsistency in the accuracy of ESP results. It's possible that too much magnetic activity acts as a form of noise, changing an individual's baseline randomness so drastically that it is hard for them to see any of the specific patterns that we would call ESP. There is also the fact that no ESP sensing or receiving organ has ever been identified, which suggests that it is due to a more general, global faculty involving a whole range of brain or other processes. Furthermore, no type of signal has been detected that could account for ESP. I would suggest that this may be due to there being no specific ESP signal but instead a huge range of signals that a talented individual (i.e. a psychic) can synthesise into a meaningful experience. Different people might also be responsive to different ranges of signals, further confusing the issue but possibly explaining some of the individual differences found in ESP research.

Conclusion

"I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world."
--- Albert Einstein (1929)

It is suggested that ESP may be firmly seated within the continuum of human perceptual experience, being an extension of a continuous process wherein our internal state is perturbed by a multitude of external forces. Specifically it is a state where we have been able to extract useful information from those perturbations. ESP is not a single sense but instead acts as a symbolic unification of a stream of weak or indirect information from a variety of sources.

In "The Act of Creation", Arthur Koestler (1989) said that an act of intuition "...may be likened to an immersed chain, of which only the beginning and the end are visible above the surface of consciousness. The diver vanishes at one end of the chain and comes up at the other end, guided by invisible links." Koestler's links of immersed chain referred to unconscious processes, and undoubtedly this is part of the process of creative imagination. But I would extend this metaphor to include the influence of the winds of chance, those external influences that act to move the sea of consciousness in random ways. Is it inconceivable to suggest that occasionally Koestler's invisible links may be stirred and brought together in meaningful ways by those wind-induced currents?

¹ In this case hallucinations refers to any unexplained visual experience, whether it is interpreted as paranormal or not

Acknowledgements

Thanks are due to the Koestler Chair, the INOVA Foundation (USA) and the Bial Foundation (Portugal), who provided support and equipment for the research that led to the ideas presented in this paper. I would also like to express my gratitude to the anonymous reviewers who provided some helpful suggestions which improved this paper.

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