

EXPLORATION OF CORE POWER OF THOUGHT CONCEPTS

An Exploration of Core Power of Thought Concepts in Relation to Theories Involving Quantum Mechanics

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Abstract: This paper examines the concept of power of thought in relation to a selection of current theories within quantum mechanics, from a layperson's perspective. Power of thought is defined as the purported ability to directly transform thought into an effect on temporal reality without further physical-level action, and with these transformations being equally effective for small to large scale manifestations. The following concepts from quantum mechanics are explored as possible theories that may support power of thought: the inseparability of the wave function, Bohm's principle of active information and the Stapp-von Neumann interpretation

Introduction

This paper explores the relationships that may exist between selected interpretations of quantum mechanics and the concept popularly referred to as *power of thought* or *power of intent*. Power of thought can be viewed on many different levels. Such a phrase could refer to things like a business person having an idea for a company and building it or an inventor having a notion of some new device and successfully

patenting the completed prototype. In these ways action is directed within the local, linear macro level of reality to achieve a desired result. While these could be defined as more classical forms, the type of power of thought I address in this paper is very different conceptually.

By power of thought I refer to the purported ability to directly transform thought into an effect on temporal reality without requiring further physical-level action, and with these transformations being equally effective for everything from small to large scale manifestations. A substantial body of popular literature exists on this topic that suggests there is some mechanism through which humans can inject a 'wish' of sorts into reality and see it realized. This information encompasses a variety of religious, spiritual and self-help related fields. With the advent of the web, books with expired copyrights are even being widely distributed and re-popularized in collections from the 19th and early 20th century, including the New Thought movement (Cornerstone Books, n.d.) and the early self-help movement (PsiTek, 2006).

The influence of these movements is by no means limited to the past. A growing number of individuals, groups and organizations have devoted instructional and outreach enterprises to this concept. A prominent example within contemporary Christianity with sizable international reach is Kenneth Copeland Ministries in Fort Worth, Texas. Numerous other examples that include this as a direct or indirect theme can also be seen in popular culture, including recent movies such as *The Secret* (Bell, Byrne, Harrington, & Heriot, 2006) and *What the #\$*! Do We (K)now!?* (Chasse, Arntz, Vicente, & Chasse, 2004). Some authors have produced synthesis products which attempt to distill the core practices of several of these systems into what they feel is the best model for practical

application (e.g., Braden, 2006; Maurey, 1990; Boone, 1992). From these authors and wider reading I have synthesized the following formula, which I feel exemplifies the concepts expressed:

$$V + E + R = M$$

V stands for visualization. Many ideas exist regarding how explicit this visualization must be and what form it should take, but most systems seem to contain a provision for it. *E* represents emotion. Much of the literature I surveyed suggests that emotion provides a form of power which drives the communication of what is desired and is critical to successful manifestation. *R* stands for release. Having injected the thought, the literature often mentions the importance of convincing oneself of the certainty involved in the process coming to a successful conclusion. Achieving this internal feeling and releasing the desire for the manifestation (*M*) is routinely suggested as directly related to how quickly and thoroughly it comes about (e.g., Braden, 2006; Maurey, 1990; Boone, 1992).

Support within Quantum Mechanics

So, can we find theoretical support for any of these notions within quantum mechanics? I would argue that we do see some core underlying support in at least the following three areas:

1. The inseparability of the wave function (Peat, n.d.c)
2. Bohm's principle of quantum potential and active information (Peat, n.d.a)
3. The Stapp-von Neumann interpretation (Stapp, 2006)

If reality is, in fact, all drawn from the same underlying energy (wave function); then it must follow that we are simply a manifestation of this. Humans would have to be

comprised of the same energy as everything else. Unlike most other life forms on Earth we are known to have an intricate system of consciousness and conscious processes, which include self-reflection. Experientially, most of us would agree that we seem to be able to separate the idea of our consciousness into an active, thinking self as well as unconscious portions of mind.

If the quantum level of reality exists, it must play some part in giving rise to our everyday macro reality. The fact that we haven't yet discovered this bridge is not relevant to our discussion here, because it must be assumed. Accepting this, is it reasonable that the bridge only goes in one direction? I do not see how this could be the case. Currently, the transformation between the quantum and the physical is best expressed in the collapse of the Schrodinger wave function. The most traditional model of quantum mechanics holds that an observer's consciousness enters an experiment through how the experiment is designed and conducted. Essentially this model deals with interrogating nature, with asking questions. The answers received relate to the question asked and how the experiment is set up (Peat, 2002). Several of the concepts in the list above, however may allow us to go beyond this.

Bohm's Concepts of Active Information and Quantum Potential

David Bohm was a well-known quantum physicist and philosopher of science who developed one of the major interpretations of quantum theory, which he felt opened "the door for the creative operation of underlying, and yet subtler, levels of reality" (Bohm & Peat, 1987, p. 88). Orthodox quantum theory proposes that if you observe an electron in one location, and subsequently in another location, you cannot assume that the electron traveled in a path between the two locations. Bohm felt differently.

In 1952, Bohm introduced the concept of quantum potential as a new kind of force within physics. He believed that even though it was not observed, there must be a path that is traveled by an electron between two locations. Bohm's concept was bold because "unlike all other potentials in physics [quantum potential's] effects do not depend upon the strength or "size" of the potential but only on its form. It is for this reason that distant objects can exert a strong influence on the motion of an electron" (Peat, n.d.a, paragraph 12). Peat goes on to suggest that, "The form of the quantum potential is extremely complex and reflects the entire physical set-up of a quantum measurement. The complexity of its form is also what gives rise to the apparently random processes of the quantum world, such as the disintegration of a radio-active nucleus, or the dual wave-particle nature of the electron" (paragraph 13)

As Bohm continued to develop his Ontological Interpretation of Quantum Theory, he began to explore an additional concept he called active information. Bohm sought to "use the activity of information as a way of explaining the actual nature of quantum processes and, in particular, the way in which a single physical outcome emerges out of a multiplicity of possibilities" (Peat, n.d.a, paragraph 3). This concept worked in conjunction with his theory of quantum potential and together they were often likened to radar guiding a ship. Radar, of course, does not provide a form of propulsion. It is simply an information source that can be used to properly control the direction of the ship. Bohm did not view quantum potential and the active information it contained as a traditional force which exerts push or pull, but rather as information that acts on raw energy to give it form.

If we view Bohm's concept of active information as acting on energy to produce effects and accept that at least some of that information may come from the observer, it seems more than plausible that this active information could be related to an interface point between our macro world and the quantum world. Just as Bohm postulates regarding the quantum potential as active information involving an experiment and Peat elaborates on in terms of just how much would have to be included in this concept, so I suggest that human consciousness must comprise some part of it.

Before we go further let's examine this idea from a broader perspective. The observer (experimenter) sets up the conditions of the experiment and gives us one way of viewing the concept of quantum potential. If it turns out that the sum total of the quantum potential is a relatively small set of information relating primarily to the experiment and the consciousness of the experimenter, the observer's effects are quite large indeed. If, however, the entire universe is folded into the quantum potential of the experiment, which Bohm and Peat seem to suggest, then the opposite is true.

Personally, I wonder if both aren't somewhat true and if there are shades of locality and non-locality involved: non-locality in the sense that the entire universe is enfolded into the experiment, locality in the sense that the experimenter's consciousness and how he or she chooses to set up the experiment will have a weighted effect on it. Even if only from this level, we must accept that the experimenter produces some effect on the experiment in order not to abandon Heisenberg and Schrodinger (Peat, 2002).

Injection of Consciousness

Clearly the above observations don't come close to validating the power of thought concept. We must go much deeper and ask whether an injection point exists in

which humans can exert even more weight on the above experiment, whether in a local or non-local sense. Indications suggest that we can; the question is how.

A variety of experiments seems to demonstrate that an individual's consciousness can impact the macro level of reality. The PEAR experiments at Princeton are on one end of this spectrum. They demonstrate a small statistical significance from people who were taken off the street in normal waking consciousness and asked to affect the output of random number generators with their thoughts (Jahn, Dunne, Nelson, Dobyns, & Bradish, 1997). On the other end of the spectrum are experiments that seem to show that power of thought used in conjunction with specific states of consciousness can produce equal or greater statistically significant effects on water and DNA (Rein & McCraty, 1994).

Having seen that matter can be altered by consciousness, we find ourselves back to the question of whether a theoretical underpinning can be found for this within the theories of quantum mechanics. Accepting the wholeness of the wave function, is it reasonable to assume that something outside of it affects it? Drawing on von Neumann, Tomonaga and Schwinger, and Whitehead; Stapp believes this is the case (2006). The overall series of processes he envisioned are:

- *Process Zero* which Stapp feels determines the free choice of the experimenter that “seems to ... arise, at least in part, from conscious reasons and valuations, and it is certainly strongly influenced by the state of the brain of the experimenter...It is the absence from orthodox quantum theory of any description on the workings of Process Zero that constitutes the causal gap in contemporary orthodox physical theory. It is this “latitude”... that blocks the causal closure of the physical, and thereby

releases human actions from the immediate bondage of the physically described aspects of reality. It constitutes the causal gap that severs the rational roots of materialism.” (2006, pp. 22-23).

- *Process 1* is an action which von Neumann describes as defining a specific partitioning of a current set of potentialities into a set of experientially distinguishable components which can be counted (von Neumann, 1996). Stapp refers to this as “an abrupt "intervention" that disrupts the orderly and continuous evolution specified by Process 2” (Stapp, 2005, paragraph 6), and also as “the choice of which experiment is performed” (paragraph 8).
- *Process 2* is essentially what von Neumann used to refer to normal time evolution as defined by the Schrödinger equation (von Neumann, 1996). Stapp refers to this as “unitary, deterministic evolution via the Schroedinger equation” (Stapp, 2005, paragraph 6).
- *Process 3* is the term Stapp applies to the collapse of the wave function (2006).

In the formulation above, we clearly see the injection of consciousness occurring at Process Zero, which leads to initial limits that coalesce a set of possible choices (Process 1) and are finally selected between by the collapse of the wave (Process 3). Taken in total, we see action by an intelligent agent that produces feedback. At a high conceptual level, this is very similar to the feedback loop created by the power of thought equation at the beginning of this paper. The two theories also have one other key point in

common, they are both psycho-physical theories. In other words, they both have a psychological component and a physical one.

The Mind and The Brain

In 2002, Jeffrey Schwartz of UCLA published a landmark book incorporating many of Stapp's theories. Schwartz is a psychiatrist doing research on obsessive-compulsive disorders. Over time he began using a primarily mental treatment protocol which fMRI research showed produced physical changes in the brain. His book is both a historical examination of the science in this area, as well as an elaboration on his theories.

Schwartz presented some of the first modern evidence to suggest that mind can produce a direct effect on matter, in this case the brain (Schwartz & Begley, 2002). At the time this went contrary to the foundations of his discipline and, as you might expect, he started to look for theories to explain it. He found a number of them in Stapp's work, which made it clear that the interpretation of quantum physics Stapp advocated could explain the effects Schwartz was getting in the lab.

Stapp's Action Template theory postulates that the "feature of a brain state that will tend to produce some specified experiential feedback can reasonably be expected [to] be a highly organized large-scale pattern of brain activity that, to be effective, must endure for a period of perhaps tens or hundreds of milliseconds. It must endure for an extended period in order to be able to bring into being the coordinated sequence of neuron firings needed to produce the intended feedback" (2006, p. 29). Also of interest is Stapp's discussion of the Quantum Zeno Effect, which "can, in principle, hold an intention and its template in place in the face of strong mechanical forces that would tend to disturb it" (p. 31). One way of thinking about this effect is in relation to the mental

effort needed to hold one's concentration. Research has shown that this mental effort is finite. In other words if one attempts to focus on two things at once, concentration on either item is suboptimal (Pashler, 1998).

Correlation with Power of Thought

Although typically discussed in relation to a mental/conscious effort translating into a person's physical actions in macro reality, the similarities between the above theory and the concepts of visualization seen in power of thought publications cannot be overlooked. Virtually all power of thought methods highlight the importance of a relaxed state where the person can focus strongly on his or her visualization and, typically, the emotional states relating to it. Indeed, some of the descriptions of mental effort found in a book such as Boone's (1992) could be taken directly from Stapp or Pashler's comments. In his synthesis text Boone emphasizes the importance of using very rich, detailed visualizations requiring considerable mental effort to generate and maintain.

Another interesting correlation can be found in the concept of release. Whether expressed as turning the issue over to God, ending with the command 'so be it' or simply putting it out of your mind, many power of thought systems stress the idea of release following steps $V+E$. Is it possible that a correlation to this idea appears in the context of Process 3, the collapse of the wave? Are these mental systems attempting to affect the partitioning of possibilities with their visualizations and then release these possibilities for manifestation through collapse of the wave? Despite the fact that quantum mechanics is designed as a model to interrogate, extract and describe information as it relates to our understanding of reality, at the very least it is interesting that for hundreds if not

thousands of years various formulas have been practiced for manifestation which seem similar to it (Braden, 2006; Long, 1948; Satchidananda, 1990).

Bridging Macro and Micro

Accepting all of the above as a possibility for purposes of a thought experiment, we're still left with the question of how this might occur. Let's return to the concept of our missing bridge. Our perception is, generally, that we live in a linear, local reality. Despite this the core principles of quantum mechanics are largely polar opposites to our macro observations, comprising instead a non-linear, non-local reality. Doesn't this essentially make the question, "What is the excluded middle?"

What if we were to approach this from another angle, asking instead where these two concepts could interface with each other? What would be the implications of local/linear and non-local/non-linear? Authors across a range of disciplines from Jung (1973) to Peat (1987) to Wilson (1991) to Combs (2000) have looked into the idea of synchronicity in ways which suggest that this is exactly how the combination of these two ideas would appear to us in local/linear reality. Accepting this as yet another piece of the puzzle allows us to push further.

What if the perception that has become known as synchronicity is, in actuality, just our occasional glimpse of the full or partial function of one level of the bridge? Further, what if that bridge is there all the time waiting for us to make better use of it bi-directionally? Perhaps every now and then someone happens to successfully send some information from the macro world to the quantum world in the form of a request. This request may go even further and enter into Bohm's concept of pre-space (Peat, n.d.a). For now, though, we'll consider it irrelevant whether this communication occurs

within pre-space or at the quantum level (referring to these collectively as “the quantum”) and focus on the effects of a conscious effort to make contact between our macro world and one of these underlying levels. I see nothing that suggests synchronicity could not be this occasional and probably extremely narrow and information-limited glimpse. The question then becomes how to widen and regularize that communication. How do we better enable localized consciousness to reach into the quantum and produce an ever greater affect on our local macro reality?

Unconscious Possibilities

One area which seems obvious for this exploration is the portion of the mind that is unconscious. Authors across many disciplines have hinted at this including a range of spiritual systems with a focus on manifestation such as Huna (Long, 1948) and ritual magic (Regardie, 1991). Why would we have a portion of our consciousness that is not available to the critical parts of it that seem to reside in the linear, local, macro level of reality? While some of it appears to relate to autonomic functions, much does not (Combs, 2002). Could it be that at least some portion of our unconscious mind resides in the quantum? At the very least this might be the level of our consciousness that is capable of using or being the bridge between the manifest and unmanifest as these and other spiritual (Cornerstone Books, n.d.) and self-help traditions (PsiTek, 2006) seem to suggest.

Further evidence may be provided by the fact that these traditions often include power of thought rituals and mechanisms which are regarded by their practitioners as highly effective. The HA rite of Huna is an excellent example of this (Boone, 1992). It deals with passing information ($V+E$) from the conscious mind to the subconscious mind,

with the goal of having the subconscious mind pass it along (*R*) to the *superconscious*. Within that system the concept of the superconscious could easily be seen to dovetail with many ideas about the quantum level of reality.

Could the practice of a technique such as the HA rite enable someone to produce enough of an effect on Bohm's field of active information to significantly alter the manifestation possibilities within the local environment? Would it enable the conditioning and feedback states described by Stapp's action templates? Could either of these form all or part of the bridge? Conceptually, the bridge is at once an abstract concept—the exchange between macro and quantum reality—and also a much more finite one. On a finite level, in any given moment the bridge must be acting to produce field effects that organize a person's macro reality. It seems possible, then, that in the progressions of the quantum field from those near a state such as pre-space to the macro reality that currently surrounds someone, there is also a gradient, however small, between non-local/non-linear and local/linear. A unified field would require some form of interface between these various levels.

This may also make the quantum level as much a boundary layer between event horizons as anything else, perhaps between the event horizons of pre-space and manifest macro reality. It is also possible that there is another as yet undiscovered boundary layer/event horizon between the macro and quantum levels of reality. Boundary layers generally have interface points, even if only to maintain a separation between layers. From this line of reasoning it seems possible to conclude that there may be interface points between the macro level of reality and the quantum state or an intermediary. While many might exist, the one which interests us is the level of the bridge that allows some

portion of our individual consciousness to interject its wishes into the quantum and have them return across the bridge to be realized.

Localized Influence on Interface Points

One of my previous suggestions is that this might be accomplished through some corner of the unconscious and made effective through use of the formula expressed at the beginning of this paper. It's possible that such a formula, when successful in facilitating an exchange of information between these layers of reality, has its communication given priority by the local macro/quantum interface as it enters the active information field in Bohm's theories and/or the transition from Stapp's Process Zero to Process 1 and eventually Process 3.

It seems likely that this gradation of the field, or interface point, would be closer to and be acted upon more by the local space it is manifesting. This is seen in the notion that how the experimenter chooses to set up the experiment has a direct impact on its outcome. It is well established that things which are closer to the experiment at the macro level affect it more than galaxies that are distant to it, though quantum theory does suggest that everything produces an effect.

Therefore, isn't it also possible that consciousness which is local to the experiment would have a heightened impact upon it? Why would the consciousness and mental effort that is being injected into the experiment locally and strongly not also be able to produce a magnified result? Indeed, Stapp's theories seem to hint at this concept (2006). This may explain why prayer studies seem to suggest a better correlation of effectiveness for prayer done locally with someone who is sick versus prayer which is

performed remotely (Chibnaljl, Jekalj, & Cerullom, 2001; Kennedy, 2002; Plamer, Katerndahl, & Morgan-Kidd, 2004; Astin, Harkness, & Ernst, 2000).

Non-Local Influence via Connectedness

There is some preliminary evidence suggesting that the notion of locality may be extensible in this line of thought. I propose that it may also relate to affinity or connectedness. At the quantum level an example of this is seen in Bell's Theorem which states, "that two quantum particles--initially in interaction but now well separated in space must be represented by a single inseparable state" (Peat, n.d.b, paragraph 3). While Peat elsewhere (n.d.c) suggests that we need to be careful of extrapolating this theorem in ways which lead to justifications of things like telepathy, to me it does seem to suggest some peculiarities regarding non-local relationships in certain interpretations of quantum mechanics.

A distant experimenter exerting strong mental effort during an experiment may very possibly produce a non-local effect. For example, if a group of people are praying in the room of someone who is ill, it stands to reason that they will establish a stronger connection to that person at the local macro level of reality than if the prayer recipient is simply a control number in an email, someone they never meet or connect with in any other way. It may be true that the greater the connection between the person being prayed for and the person praying for him or her, the greater the effectiveness of the prayer will be. There is already some evidence for this type of affinity in distant intent experiments, such as the recent work by Achterberg et al. (2005).

One way to test this further may be to have the prayer team meet regularly with the test subjects but not actually have them pray while in their physical presence. Instead,

they could pray from a distance after forming more personal connections. I suspect that even though this is non-local prayer, the connection they enjoy with the person on some level of locality within macro reality would produce an effect.

This may also explain the research regarding witnesses that has been conducted in the psychotronic, dowsing and radionic communities. A witness is a link to the person or thing (their target) that a practitioner is attempting to affect. These communities seem to widely believe that pictures, hair samples and blood samples are the most effective witnesses. They do, however, also allow for just writing someone's name on a piece of paper if nothing else is available (e.g., Cosimano, 1992; Hartman, 1992).

It's possible that these widely regarded witness types are simply the most effective links between the non-local practitioner and the target's local reality. Or, that the practitioners of those disciplines are correct in their assertions that witnesses allow them to step out of the way—in other words produce a greater non-local/non-linear effect—and solely impact the local reality of the target. The concepts I propose in this paper would support that possibility.

More broadly, the theory could explain the many different effects power of thought practitioners appear to achieve on the lives of others (Maurey, 1990). Indeed, it would be interesting to correlate whether a spectrum of effectiveness exists between a fully blinded study in which a target is nothing more than a number, through a gradient which ends in a study in which power of thought is done with the target in the presence of the practitioner. My preliminary speculation is that a correlation is likely. If that is the case, what we might actually be viewing is the magnified effect of consciousness which

relates to manifesting that local portion of reality. The closer we get to the bridge involving that locality, the greater the effect might be.

Summary

In this paper I have examined possible explanations for the efficacy of power of thought through several interpretations of quantum mechanics, approached from a layperson's perspective. I began with a definition of power of thought as the purported ability to directly transform thought into an effect on temporal reality without requiring further physical-level action, and with these transformations being equally effective for everything from small to large scale manifestations. A synthesis formula was proposed which was distilled from a wide range of power of thought literature: V (Visualization) + E (Emotion) + R (Release) = (M) Manifestation. Next, I explored a variety of theoretical concepts from quantum mechanics as theories that may support power of thought, including: the inseparability of the wave function, Bohm's principle of active information and the Stapp-von Neumann interpretation.

Inseparability of the wave function was drawn upon to illustrate the concept that everything arises from a common energy. Bohm's theories of quantum potential and active information, as extended and interpreted through Peat, were explored in relation to the ability of information to shape not only quantum but also macro reality. I further suggested that the concept of active information could be extended to form a method in which the consciousness of the observer could shape the field of quantum potential and thus exercise greater control over both quantum and macro reality.

The Stapp-von Neumann interpretation of quantum mechanics was examined as a process theory which may possibly lend theoretical support to the power of thought

concept. Stapp argues that the consciousness of the observer enters from outside the system in Process Zero. I further suggested that it may be possible for this to be the mental intent of the observer alone, and that this intent partitions the cloud of potential manifestation possibilities at the Process 1 level, which are then manifested at Process 3. This process seems to correlate very closely to the $V+E+R=M$ formula. I also explored the possibility that Stapp's Action Template theory and the related Quantum Zeno Effect may play an important role in understanding why sustained visualization ($V+E$) is often recommended in the power of thought literature.

In addition to the above theories, I proposed the idea that quantum or an as-yet-undiscovered level of reality may form an interface, boundary layer and/or event horizon between the micro and macro. Using the metaphor of a bridge, I suggested that bi-directional communication may be possible using the principles of quantum mechanics expressed previously. I further suggested that a correlation might exist regarding priority of effect given by this bridge to information that is local. Finally, I proposed that locality may not necessarily relate to how we would typically define it temporality, but may also relate to a degree of connectedness between a non-local observer and a locally effected person or environment.

End Note

This paper primarily contrasted the views of David Bohm as expressed, interpreted and extended by David Peat; and the views of John von Neumann as expressed, interpreted and extended by Henry Stapp. Given the range of debates within the quantum mechanics and larger physics communities I felt it was necessary to narrow down the available theories and interpretations for this initial exploration of power of

thought. Following the original Copenhagen interpretation, I feel the Bohm and von Neumann interpretations are the most likely to be encountered by lay readers who are interested in these and related topics.

I chose Peat and Stapp because they are distinguished senior members of the physics community who have done extensive thinking and writing in one of these two major quantum mechanics interpretations. Both of these leading philosophers of science have been deeply involved in questions of consciousness for a number years, and in many ways they can be regarded as the keepers and extenders of these two traditions from this perspective. Each is also quite conservative in their thoughts and the defense of their arguments. Unlike others who seek to build on some aspect of Bohm or von Neumann's work, or propose new theories entirely, Peat and Stapp are much more rigorous in their underlying interpretations, what they will and won't accept and even how far they are willing to stray from Copenhagen.

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