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Where is "Out There"?

ESSAY

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HIGHLIGHTS

'Psychic' information may exist and operate in a non-physical domain that is fully integrated with the physical universe of matter, energy, and spacetime.

ABSTRACT

Experimental evidence and verified individual accounts show that visual and other types of information from distant minds and environments can enter the conscious as well as the unconscious mind of an individual and can measurably affect brain and body function. The information appears to pass through every physical obstacle and does not degrade in quality with increasing distance in the path between source and receiver. No signal can be detected with current physical instrumentation. What is the medium in which this "psi-encoded information" appears to propagate? What is its format? What is its lifetime? Selected examples of apparent psi information propagation from differing types of sources are presented and analyzed. In order to account for the behavior observed in the examples, a worldview developed in the Advaitic thought tradition is considered, in which a non-physical domain interacts with the physical domain of matter-energy and spacetime. A main currency of the non-physical domain is postulated to be psi-encoded information. It is concluded that this information does not propagate through space. Other characteristics of the non-physical domain and its content are inferred from the examples. They provide a framework in which the nature of psi-encoded information and its processing may be further explored.

KEYWORDS

Clairvoyance Information, consciousness, non-physical, telepathy, psychometry, thoughtforms, , universal mind,

INTRODUCTION

When I was in graduate school studying experimental psychology, I was invited for dinner to a woman's house whom I had just met. We were in her kitchen. Early in our conversation, she mentioned to me that she was psychic. Our conversation wandered, and eventually, there was a lull. She was stirring vegetables in a frying pan with her back to me. In the silence, I decided to try an experiment to see if she really was psychic, and without her knowledge, I silently visualized a bright white '6' against a black background. To my amazement, she whirled around to face me and said, "Did you just put a 'six' out there?" I said that was exactly what I did! But I thought, what did she mean by "out there?" Where is "out there?" And I assumed that the probability of my impromptu "experimental result" being "pure coincidence" was essentially zero.

The event mentioned above describes an instance of

telepathy – communication of thought information between two individuals using biology alone. Experimental studies have shown that the quality of telepathy is not affected by the distance between a sender and receiver, and physical obstructions in the path between them, such as electrical shielding or mountains, do not degrade telepathic quality (Radin, 2006; Targ, 2012; Utts, 2018). It has not yet been determined whether the speed of telepathic information sharing is limited to the speed of light or if it is possibly instantaneous, as is theorized to be the case with information sharing in quantum entanglement (Caltech Science Exchange, 2022). No known instrumentation is able to detect the presence of the telepathic "signal" during its apparent transit from one point in space to another. But the fact of telepathy's existence is undeniable. It is substantiated by a growing body of experiments and meta-analyses with statistically significant results (Cardeña, 2018; Mossbridge et al., 2012; Utts, 2018). It is substantiated by a growing number of instances of spontaneous telepathic events that occur and are reported in every culture (Society for Psychical Research, 2023). Telepathically shared information can be classed as a form of "psi-encoded information." This type of information is definitely "out there," even if only for brief periods during telepathy, but where exactly is "out there?"

In order to investigate this question, selected examples in which psi-encoded information transfer has been observed will be presented as a starting point. Some readers will not believe the documented examples below. Others, especially those who have personally had psi experiences, will not doubt their veracity.

Our senses tell us that we cannot see things that occur farther away than the eye can see. But data shows that clairvoyants have been able to, for example, help police solve crimes by "seeing" a specific distant scene where a crime took place, or the scene in which a person of interest may be found (Pollack, 1964; Wehrstein, 2019). Even if this kind of event happens rarely, when "pure coincidence" and fraud are ruled out, it points to the need to revise our current model of reality.

One fact about research into psi phenomena must be understood: currently, there is no foolproof paradigm to test for psi that is easily replicable. A growing number of published papers show failed replications of experimental data. Walach et al. (2021) cite many instances of failed replications of different types of psi phenomena, including notable failures like that of Radin's double slit paradigm (Walleczek, J., & von Stillfried, N., 2019) and the PEAR paradigm (Jahn et al., 2000). These experiments address interactions of human consciousness with physical devices and processes.

At the same time, the number of confirmed spontaneous cases of the phenomena that occur worldwide (Society for Psychical Research, 2023) continues to grow, as well as the number of experiments with various psi phenomena which find statistically significant results. What might be happening can be illustrated by historical example. In the history of science, new theories often face resistance until sufficient evidence accumulates to support them. The existence of disease-causing germs was initially met with skepticism by many in the scientific community. Even after Semmelweis discovered that the incidence of postpartum infections could be drastically reduced by handwashing with chlorinated lime solutions, his ideas were largely ignored, ridiculed, and rejected. However, the accumulation of evidence from experiments and observations by Pasteur, Koch, and others eventually led to the wide acceptance of germ theory. This paradigm shift revolutionized the field of medicine. The transition from skepticism to acceptance of the germ theory of disease demonstrates the nature of scientific inquiry, where evidence and open-mindedness drive progress and lead to the revision of outdated or incorrect models of understanding the world.

Psi phenomena certainly deserve, at this point, to be called "elusive" in laboratory settings. Over time, innovative methodologies and technologies help shrink this elusiveness. For example, experiments like that of Achterberg et al. (2005) (detailed in Example 4 below) have produced strong effects. Their methodology involved working with practiced distant healers and fMRI technology to observe recipients (Rebman et al., 1995). They also used a distant healing methodology in which changes in recipients' blood volume pulse (BVP) and other physiological variables were monitored. They obtained combined BVP results of $p = 0.00002$.

It requires only one solid, well-documented instance of a phenomenon to indicate that the phenomenon exists. Enough of such instances have occurred, documented in the references of this paper alone, to conclude that biological communication that transcends distance is real. But this phenomenon is not explainable with today's science, and not reliably replicable, with the result that some choose to believe it is not real.

PSI-ENCODED INFORMATION TRANSFER EXAMPLES

Telesomatic Phenomena

Consider the case of the twins, Marta and Silvia:

> Marta had burned her hand on a hot clothes iron. As a large red blister was forming, an identical one developed on the hand of Silvia, who was away visiting her grandparents at the time.

> Silvia was taken to the doctor, unaware of what had happened to her sister Marta. When the two little girls were united, their parents saw that the blisters were the same size and on the same part of the hand (Dossey, 2016, p. 196).

More cases of this type have been documented (see Dossey, 2016; Playfair, 2002). This kind of telepathic connection, where physical symptoms such as burns and bruises are shared, is termed a *telesomatic event*.

Psychometry

Psychometry is a form of clairvoyant phenomena in which the clairvoyant becomes consciously aware of the desired information by means of the connecting link of material objects, such as a sealed envelope with written material inside, a piece of hair, article of clothing etc., which has had previous associations with the thing, person or scene regarding which clairvoyant information is desired. The desired information can be accessed by a clairvoyant in the following way:

> Take strange objects, and, sitting in a quiet room with the object held to your forehead, shut out all thoughts of the outside world, and forget all personal affairs. In a short time, if the conditions are all right, you will begin to have flashes of scenes connected with the history of the object (Panchadasi, 2011, p. 63).

Psychometry Case Study 1 – Ossowiecki's Remarks When Given a Sealed Envelope

(Quoted text and figures in the three case studies below are reproduced from Barrington et al., 2005).

Stefan Ossowiecki ("ah soviet zki") (1877 – 1944) was a modest Polish engineer and industrialist who demonstrated exceptional clairvoyant ability from an early age. He was happy to participate in a series of controlled observations and experiments conducted in Warsaw and Paris. These are quoted from Barrington et. al. (2005), a book which documents his many clairvoyant abilities. The transcribed narrative below is from a public experiment conducted on October 29, 1925, in Warsaw:

> A letter from Spain... I see a yellow-white house, two story, entrance through a small garden, and on the right a lot of greenery, stone stairs around, entrance on the right hand side. The house of a man of modest means. Then a moment in the study, when he is writing this letter, not a letter. A small dark-haired man, an open forehead, very lively, dressed in black, six o'clock, a hall next door. His wife passes, he is upset by a terrible tragedy, he has lived through the loss of a child, a girl. His wife expects another. A boy has been born already, they wanted a girl. Masses of books around, leather seats, not new. When he was writing this letter, a man entered, they talked. Next to the study a narrow vestibule, from there a tiny hall, glass verandah towards the garden, lots of flowers and greenery.
>
> A strange child next to him. The wife is 32, dark hair, pointed nose, dress in black, something black hanging from the neck – these are dice.
>
> The master, the doctor, he has scissors on the table, he is cutting up paper, holding papers. It is not a letter, only something written down. A man of science, studies a lot, has a number of degrees, has encyclopedic knowledge.
>
> He has approached the table and he begins to write, he is bent. He is cutting bits of green paper, the seal ready on the table. I see what and how he draws.
>
> He wanted to draw a circle within a square, then a face, and he finished with a point" (Ossowiecki draws. [See Figure 1]) He gets up, lights a cigarette and comes back to the table. He picks up a pencil or a pen and writes a question, draws an enormous 'T.' Here he writes something, two questions, questions about the paranormal. He asks me if I believe in telepathy. "At the top it is written in French. There is someone else in the room, an older man. The question: 'Croyez-vous à la télépathie?' The second – do I believe in life after death? The apartment has four, six rooms."
>
> When the envelope was cut open, inside was found a sheet of white paper. folded in two, covered by three rectangular sheets, two of which were green. The drawings and the sentences written on the white sheet correspond in the smallest detail to the drawing by Ossowiecki.
>
> The documents were sent to Martinez, who wrote back to the Metapsychical Institute, and to Ossowiecki, who cites from the letter to himself:
>
> Everything that you saw, apart from a leather armchair, is totally accurate.
> (Barrington et al., 2005, p. 93)

Psychometry Case Study 2 – Ossowiecki's Remarks When Given a Sealed Box

This is an account of an experiment carried out by

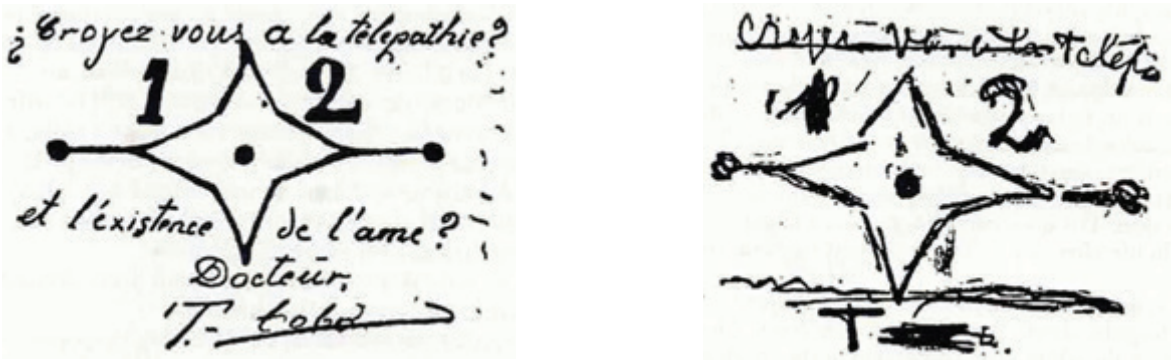

Figure 1. Left: Drawing in a sealed opaque envelope; Right: Drawn by Ossowiecki. From: Barrington et al., 2005, pg. 94. NOTE: The information Ossowiecki accessed was likely in Martenez's memory. If so, this could have been a form of telepathy if all the details were in Martenez's memory. Otherwise, Ossowiecki was clairvoyantly seeing an event that occurred in the past.

the Polish Psychophysical Society. The experiment was conducted by Prosper Szmurlo, editor of Zagadnienia Metapsychiczne, on January 20, 1935. M. Denoise Jonky assembled the package and gave it to Szmurlo, who, after trying a few times unsuccessfully to arrange an experiment with Ossowiecki**,** put it in his desk drawer, where it stood untouched for years and forgotten. When Szmurlo heard that Mr. Jonky had died, Szmurlo remembered the box and arranged to meet with Ossowiecki. At that time, the contents of the package were unknown to anyone living. The package was 7 cm x 4.2 cm x 4 cm, of cylindrical shape, covered with cloth and cross-tied with cord sealed with wax at the ends and crossing points, weighing 59.5 grams.

> The package has been sent to someone who looked very much like M. Gravier. It was in his apartment, the package stayed there, I see it down there in the bookcase.
>
> There are some pieces of something in there, several things ... two ... three... brown...like lime stones. There are also some metal clips. There is a connection with volcanic mineral. It was once in the hands of a girl. She was to give them to someone ... it's something like a family souvenir.
>
> There is something here that pulls me away to other worlds ... towards another planet. Now I am seeing a huge planet, immense, a distant world quite unconnected with ours.
>
> It is rushing headlong through outer space. It collides with another body. There is a catastrophic cosmic event.
>
> Something breaks away, breaks up, shatters into small pieces. They rush on, they fall to earth in various places. Yes, yes, they are pieces of meteorite. [...] (Barrington et al., pp 82-83.)

When the package was opened, it contained, among other articles correctly described elsewhere in the narrative, 3 pieces of light brown stone analyzed to be limestone, and it contained paper wrapped around meteorites, labelled AEROLITH.

Precognition - Ossowiecki's Remarks Regarding Specific Future Events

This case occurred in 1927. It was reported by Ossowiecki and confirmed by Antoni Jaroszewicz. A tenor singer, D. Smirnov, asked Ossowiecki what would happen to him in the near future:

> After concentrating for a few minutes, being in a very good mood, I easily transported myself into his world and told him, "You will divorce your wife. You will be invited for a number of concerts to America, where you will meet a woman, a Russian, with whom you will fall in love and whom you will marry shortly after. Her name will be Lydia."
>
> Smirnov denied this vigorously, saying that this was impossible since he had no intention of going to America and getting married again. Two years later, in 1929, he visited Warsaw again. ... Here is a short report by Mr. [Antoni] Jaroszewicz:
>
> "I confirm that everything Mr. Ossowiecki has written about Smirnov and the prophecy according to which the singer would divorce his wife and marry again, this time a Russian called Lydia whom he would meet in America, came true exactly." (Barrington et al., p. 120)

Distant Intentionality

Achterberg et al. (2005) published an experiment,

entitled 'Evidence for Correlations Between Distant Intentionality and Brain Function in Recipients: A Functional Magnetic Resonance Imaging Analysis', in the *Journal of Alternative and Complementary Medicine* in 2005. In this experiment, eleven healers who expressed an ability to connect or heal at a distance - the phenomenon of distant intentionality (DI) - were recruited from the island of Hawaii. Each healer selected a person with whom they felt a special connection as a recipient for DI. Each recipient was placed in an MRI scanner that was physically isolated from the healer. At random 2-minute periods unknown to recipients, healers sent forms of DI that related to their own healing practices. Very highly significant differences (p = 0.000127) in brain activity were found between periods of healing and no healing. "This study ... demonstrated that distant intentionality (DI), defined as sending thoughts at a distance, is correlated with an activation of certain brain functions in the recipients" (Achterberg et al., 2005, p. 965).

Thought Forms

Another psi phenomenon deals with what has been referred to as a "*thought form*" (alternate spellings: "*thoughtform*", "*thought-form*"). This term has been attributed to a broad variety of phenomena (see Besant & Leadbeater, 2016; Mayer, 2007; McCoy, 2011; Leadbeater, 1968; Parker & Puhle, 2018). A truncated definition provided by Parker & Puhle will be adopted to describe the term here:

> The term 'thoughtform' describes the concept of an entity created directly and exclusively by the mind, whether unconsciously or consciously, which appears to develop a life of its own, as an independent agent in the real world [...] (Parker & Puhle, 2018, p. 1).

Harold McCoy, dowser, healer, and clairvoyant who successfully located a stolen harp over 2000 miles away after receiving a request over the telephone from a person he had never met (Mayer, 2007), provides an excellent example for understanding what is meant by *thought form* in the current discussion. McCoy explains how he used one to get rid of pests:

> I got into a meditative state...When I was visualizing, I saw a bubble come out of my solar plexus – just energy, a "thought form." It got larger and larger, and then I was inside it. I was in the geometric center of this bubble. It looked like a "dome" because half of it was underneath the ground, so it could take care of other things. So, in my mind's eye, I could see this bubble getting bigger and bigger, so that it went out to the edge of my yard and my garden.
>
> I was programming the following to happen: I was saying, "Ticks and chiggers will be very uncomfortable in the center of this bubble, and they'll all want to get out of it. Those that are out will not come into it, because it is filled with energy that is detrimental to ticks and chiggers." I was visualizing this bubble and these thought forms. You can program things to do what you want. I programmed this bubble so that ticks and chiggers would be uncomfortable in it and move out of the yard. In a few days I realized I had no more ticks or chiggers on me. (McCoy, 2011, p.37)

A *thought form* essentially is the creation of a thought with intention which can be associated with a specific location or material in space and which persists. The intention in a thought form can influence the behavior of living organisms.

McCoy mentioned his use of another thought form which he put into operation to ensure that the person who robbed the harp would treat it well (see Mayer, 2007, p. 264).

Linked Physiological Responses

Radin (2004) conducted an experiment in which one subject (the receiver, "R") relaxed in a room shielded from radio waves facing a video camera. In another room, a friend (the sender, "S") watched a video screen at random times which, after 5-25 seconds of a blank screen, would show the image of the receiver in the remote room for 15 seconds. Both subjects were connected to EEG data recorders. EEG data averaged over 622 trials from 13 pairs of subjects shows that both the senders' and the receivers' brain wave activity showed a peak when the sender saw the video of the receiver transition to on or off (Figure 2a). The data also showed that the stronger the EEG peak variance in the sender, the stronger the EEG peak variance in the receiver (Figure 2b). Standish et al. (2004) have replicated Radin's basic finding and comment:

> Since 1963 seven independent laboratories in the United States, Mexico, England, and Germany have published data showing statistically significant correlated EEG signals between two humans who are separated up to 10 meters and in sensory isolation from one another. Since 1963, each laboratory has used different psychophys-

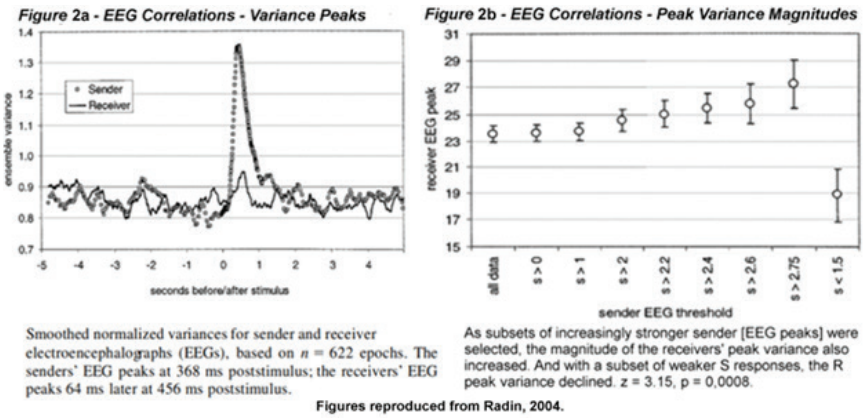

Figure 2. (Figures reproduced from Radin, 2004)

ical, electrophysiologic, and statistical methods that began in 1963.

The correlation between brain signals that appear to occur between human brains at a distance seems to have been established after 40 years of research. Research must now proceed with studying its physical and biological mechanism, its generalizability to varying populations and relationships, and its clinical application (Standish et al., 2004, p. 313; cf. Richards et al., 2005 and Radin, 2017).

Intelligent Need Fulfillment

There is a form of psi phenomena in which the psi-encoded data-handling functionality appears to be complex and capable of influencing high-level "willful" behavior of humans in specific ways. Consider the following account by an "utterly astonished" hitchhiker:

> My grandmother lived about four miles from the little church my parents usually attended. I was to go to the service there on Easter Day. Afterwards, I decided to walk the four miles back rather than wait forty minutes for the bus because I wanted to test out my solution to a familiar school mathematics question. I had worked out exactly how fast I would have to walk so the bus wouldn't catch me up. If my calculations were wrong, I would admit defeat by taking the bus for the rest of the journey. I was absolutely determined to walk those four miles at just the right pace, to prove that I'd worked it all out correctly.
>
> However, after about twenty minutes, I was shocked to find that – in what I can only call a reflex action, as though my right arm had suddenly taken on a life of its own – I put out my right hand to thumb down one particular car. I was utterly astonished to watch myself defeating my own purpose. To my relief, the car drove past – my race against the bus was, I thought, not to be spoilt. But a moment later, the car suddenly stopped. Since, regrettably, I had thumbed it down, I felt I had to accept the offered lift.
>
> I got into the front beside the chauffeur. I imagined he had first driven by and chosen to ignore me, but had then been told to stop by the lady in back. So I turned to her, and simply said, "Thank you."
>
> She immediately asked, "Were you at Winchester?" I had no idea what prompted the question, but I replied that I was currently at that school.
>
> She replied, "If you are there now, you won't know the person I am thinking of. He was called Roddie Casement and he went to Winchester, but that must have been a long time ago now." When I told her that she was actually speaking of *my father*, the lady was delighted, and immediately asked, "Is his mother still alive?" I informed her that she was, and that we would soon be driving past her door, two miles down the road we were on. The lady then told me a story almost exactly parallel to the one I had been hearing from my grandmother all week. This lady had been trying to trace her very close friend – my grandmother – ever since they had lost touch during the war. She was, in fact, the friend my grandmother had been seeking for ten years. They spent that day together – probably their last chance, as my grandmother died soon thereafter. (Account by Patrick Casement in Mayer, 2007, pp. 21-22)

This form of psi suggests that areas of the human

brain involved with the control of muscular activity are connected to an information handling system that has knowledge of and operates on information "out there". Apparently, this information handling system for psi-encoded information can directly influence the "willful" actions of biological entities. (Other examples of this type of behavior are given in Mayer's book.) In this case, "as though my right arm had suddenly taken on a life of its own – I put out my right hand to thumb down one particular car". An arm and its hand "had suddenly taken on a life of its own". The action felt like a "reflex action" – a muscular movement that does not involve the "free will" of the individual.

The specific processing of psi-encoded information that occurred appears to have had the ability to *fulfill specific needs by "intelligently" controlling and coordinating the behavior of one or more individuals*. This type of psi phenomenon does not have a particular name. Its existence forces a re-examination of the true nature of free will – which apparently in special situations can be *temporarily overridden,* and it points to a form of information processing of psi-encoded information "out there" in which an apparent *goal-oriented intelligence* is active, rather than being a simple "system" that handles psi-encoded information – simply a mechanical type of information storage and retrieval system. The general type of goal-oriented "intelligent" processing in the above example may be classed *as need fulfillment*, and its limitations are unknown. Its ability may extend to modifying DNA to fulfill needs in evolutionary development.

The psi phenomenon described in this case may be considered an extreme example of the typically synchronistic behavior of psi. Discussed in von Lucadou et al. (2007), psi tends to occur in the framework of a "meaningful coincidence". In their theory, psi phenomena operate in a framework where causality of the kind physicists know and apply successfully is not applicable. The result is that from the perspective of physical spacetime, the "synchronistic behavior" of psi phenomena might well appear random and not be easily replicable.

INFERENCES FROM THE EXAMPLES

Listed below are inferences which can be drawn from the Examples:

(1) Information "out there" can be sourced from the minds of beings with consciousness (telepathy, distant intention, etc.).
(2) Information "out there" is capable of affecting both the body as well as the mind of a recipient (telesomatic phenomena, distant intention, linked physiological responses).
(3) Information "out there" can be sourced simply from information at specific locations in space ("geolocated information") specifying configurations of purely inanimate matter (clairvoyance, psychometry).
(4) Geolocated information from the past, present, and (predicted) future is "out there" (clairvoyance, psychometry, precognition).
(5) Psi-encoded information can, with intention, be put "out there" in specific geographic locations with the ability to affect the actions of living beings in those locations for an extended period of time (thought forms).
(6) Psi-encoded information "out there" can be processed in complex ways to bring an individual with a specific need together with a specific individual who can fulfill that need – a phenomenon that could be called "intelligent need fulfillment" or "synchronistic behavior".

A NON-PHYSICAL DOMAIN

Given the examples above, a number of issues arise: (1) There must be a way in which information "out there" is stored. (2) There must be a way in which the information appears to move across distance in physical space. (3) The information would be expected to have some kind of *format*. How and where is it stored? What is its format? How does it propagate? To answer these questions, an appropriate concept of the structure of reality is needed.

Western science currently embraces *physicalism.* It claims that everything in existence, including the mind and consciousness, can be explained in physical terms. However, no known instrumentation can detect any energy supposedly used to propagate the information transferred from one point to another in the above examples, and the source and mechanism of consciousness are unexplained. The Advaitic worldview expressed in Maharaj (1981) regards reality in terms of *three* aspects instead of a single "physical" aspect. This worldview postulates three *Akashs*, translated as *expanses*: (1) the *expanse of matter-energy*, "the physical space with all that can be contacted through the senses," (Maharaj, 1981, p. 191) This is the familiar physical domain acknowledged and explained by Western science; (2) the *expanse of consciousness*, "the mental space of time, perception and cognition," (Maharaj, 1981, p. 191) also referred to as "universal mind" (Maharaj, 1981, p. 227); (3) the *expanse of the source*. The *expanse of the source* can be understood here as a source of fundamental "*pure awareness energy*" which is required for consciousness to occur. These three

Akashs are fully interconnected. They express a more multifaceted nature of reality than is currently believed to be the case in Western science.

In the Advaitic worldview, the *expanse of consciousness/universal mind* is not physical in nature, and it is claimed to be the abode of the *mind* and *consciousness*. The non-physical domain, then, is the domain in which the *content of consciousness* is experienced. This basic core of three aspects was expanded into a more Western-style model, called "TAM" for "Three-Aspect Monism", shown in Figure 3 (see Graboi, 2023 for a detailed description of the "TAM" model).

Once the existence of a non-physical domain of reality intimately connected with the physical domain is accepted, the question of "where is 'out there'?" becomes much easier to answer: "out there" is in the non-physical domain. This answer is based on the thought system expressed in Advaita Vedanta (see Maharaj, 1981), and referred to here as the *expanse of consciousness/universal mind*, or "EC" for short. Throughout history, the concept of a realm that is not physical in nature has appeared in various forms across different cultures and belief systems. A number of philosophers, including Hegel and Jung, and movements, including the New Thought and Theosophy movements, have advanced the idea of a "universal mind," or a "collective consciousness," as being a part of our reality.

Western Physicist David Bohm theorized the existence of two "orders" of reality, the "Explicate Order," which is the familiar domain of the physical, and the "Implicate Order," a non-physical domain composed of a form of information he and his colleague Basil Hiley called *active information*. Bohm theorized the Implicate Order as "informing" the Explicate Order, meaning that the non-Newtonian active information in the Implicate Order guides the composition and behavior of the matter-energy in the physical universe – an information-centric universe. The theory proposes an oscillation in which the Implicate Order "unfolds" into the Explicate Order, which then "enfolds" back into the Implicate Order, and so on. Bohm termed this dynamic process *holomovement*. *Information*, in Bohm's process of "unfolding," is not just a set of data points or bits but a participant in the fundamental processes and relationships that constitute reality.

Physicist John Wheeler (1989) conceptualized a similar information-centric universe in his famous catchphrase "It from bit" — "it" refers to all the matter-energy of the universe, and "bit" means *information*.

The three-aspect monism model in Figure 3 has a third domain with an admittedly metaphysical character. It is the source of "pure awareness" – a fundamental, irreducible metaphysical primitive – without which consciousness and all phenomena in which consciousness is involved would not be possible. Any complete model for reality must concede there are foundational metaphysical principles on which it rests. In physical science, these are the foundational metaphysical principles which make physical phenomena possible – for example, that which

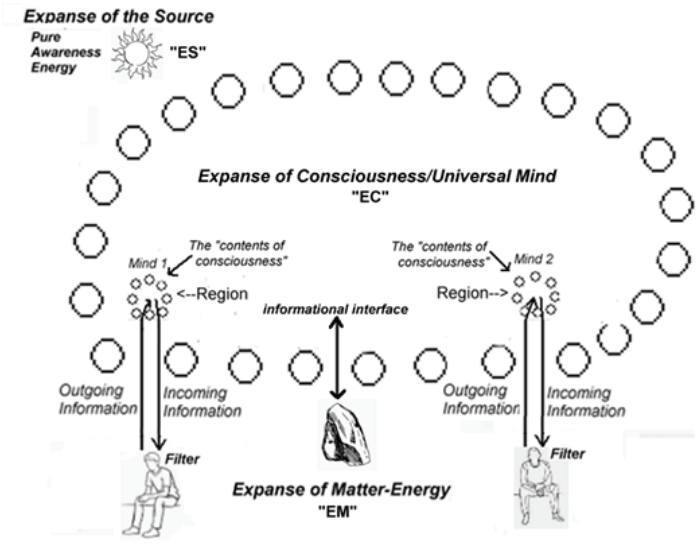

Figure 3. Basic Three Aspect Monism (TAM) Model. All the information in the *expanse of consciousness/universal mind* ("EC") is available in every small region of the *expanse of matter-energy* ("EM"). Every *individual mind* is viewed to occupy a *region* of the EC. A change in one region is thought to change the entire EC data structure instantly. The three *expanses* operate as a unified system in the present – a real-time "three-aspect monism" ("TAM") model. *Non-physical information ("psi-encoded information")* and its processing is a characteristic of the EC. *Non-physical information* is interfaced with matter in the EM, which includes brains, bodies, and inanimate matter-energy. The *expanse of the source* ("ES") provides *pure awareness energy* which makes consciousness possible. In addition to processing information associated with living organisms, the EC processes information associated with inanimate matter, illustrated by a rock in the figure. The *source* domain is described as "absolute", with a character beyond physical and non-physical. See text and Graboi (2023) for further explanation of the character and behavior of the three *expanses*.

makes matter-energy and spacetime possible. "Pure awareness" is seen as a basic metaphysical foundational principle.

Foundational metaphysical principles are not addressed in many modern theories of consciousness. Integrated Information Theory (IIT), proposed by Giulio Tononi (2004), suggests that consciousness arises from the integration of information within a physical system. The theory suggests that any system with a certain level of information integration experiences consciousness to some degree (possibly including artificial systems). IIT is based on the physicalist notion that consciousness emerges from information processing systems as their complexity increases. But, no explanation is given as to how such emergence occurs.

Panpsychism, a theory of consciousness that is experiencing a resurgence, suggests that consciousness is a fundamental property of all matter, not just complex systems like brains. This view holds that even simple matter possesses some form of consciousness. But no explanation is given as to what makes it possible.

Other current theories propose that quantum mechanics plays a crucial role in consciousness. Roger Penrose and Stuart Hameroff's "Orchestrated Objective Reduction" (Orch-OR) theory (2014) suggests that consciousness arises from quantum state reductions occurring in microtubules within brain cells. Again, this theory does not explain the underlying nature of conscious awareness.

Rather than viewing consciousness as an emergent property of physical processes, Advaitic thinking considers the pure awareness that underlies consciousness as a fundamental building block of reality, a primary metaphysical aspect of the universe from which material existence emerges and with which it is intrinsically intertwined. The hypothesis of a metaphysical domain containing pure awareness (Figure 3, "ES"), if true, implies that consciousness transcends computation and suggests a direct connection of consciousness to a metaphysical, unexplainable root principle.

Although a complete scientific explanation of "pure awareness" may be a "hard problem" (Chalmers, 1995), this may be because it is *beyond understanding by the mind*. However, the informational structure and function of the *expanse of consciousness* (EC) remain amenable to scientific analysis. Inferring from the behavior observed in the examples above, properties which appear to characterize the EC are suggested and discussed below and summarized in the APPENDIX.

All The Information in the EC is Available Everywhere in Spacetime

To conceptualize how an entire store of information can be available *everywhere in the universe,* Bohm (1980) provided the analogy of the *hologram* (see also Talbot, 1992). In a conventional 2D hologram of a 3D scene made using film and lasers, any small piece of film can be cut out, and, in the ideal case, it contains *all the three-dimensional information* in the entire scene in the hologram – all the information is available everywhere on the film. Generalizing to the concept of a higher-dimensional hologram, any small region of physical spacetime, analogous to the piece of film, would have the entirety of higher-dimensional information available in it. If the information in the EC were organized holographically, all the information contained in the EC would then be available *everywhere* in physical spacetime. This behavior is observed, since events involving psi-encoded information occur all over the world and are insensitive to distance.

A Change at Any Place in Spacetime Instantly Affects the Entire EC

If the information in any small region changes, the entire "cosmic hologram" is assumed to be affected simultaneously. The view of *the universal mind* expressed by Maharaj (1981) is that it is "the totality of all perceivers" (Maharaj, 1981, p. 192). In the TAM model, A *local region* of the *universal mind* is assumed to act as the *local mind* of an individual. It appears possible for a local mind to "put a thought 'out there' in universal mind" simply by thinking the thought with whatever intention accompanies that thought. And it appears possible for a suitably sensitive distant mind anywhere to receive that thought immediately by "tuning in to it". The speed of thought has not yet been measured, but if it is shared in a non-physical domain that operates outside of physical space and time, there is reason for it to behave nonlocally with instantaneous transfer speed.

Participatory Universe

Each *individual mind* is assumed to be *informationally interfaced* to the "cosmic hologram." A change in one mind instantly changes the entire hologram of which it is a part, which includes every mind. Williams writes: "...relying heavily on Bohm's pioneering work, I am proposing that our conscious experience is ultimately rooted in an information rich, non-local' space.' ... our minds share this inherently non-local space" (Williams, 2019, p.32). John A. Wheeler stated, "all things physical are information theoretic in origin and this is a participatory universe" (Wheeler, 1989, p.311). A "participatory universe" is one in which all minds contribute. The Advaitic view, as expressed by Maharaj, is that "Everything affects everything. In this

universe, when one thing changes, everything changes. Hence the great power of man in changing the world by changing himself" (Maharaj, 1981, p.360).

Psi-Encoded Information Does Not Move Through Space

As a hologram operating outside the physical realm, the EC distributes information instantaneously. From the perspective of the physical realm of energy-matter, this information appears to "propagate" from one point in spacetime to another. But, this apparent movement of information from one point to another in physical space is better described as *correlation* rather than *propagation.* A presumably equivalent type of instantaneous apparent movement of information is seen in the quantum mechanical phenomenon of *entanglement.* In this phenomenon, for example, if two electrons are created together as a system of "entangled" electrons with opposite spins, they can become separated by any physical distance, but when the spin of one is reversed, the spin of the other reverses simultaneously – breaking the speed of light limit (Caltech Science Exchange, 2022). This information-sharing behavior is referred to as "correlation" rather than "propagation" in quantum mechanics; for consistency, the same behavior of the apparent motion of psi-encoded information through physical space would better be regarded as "correlation". This would follow if entanglement and telepathy use the same underlying communications infrastructure. The phenomenon of quantum entanglement hints at a reality where observable physical phenomena emerge from a deeper, interconnected realm, one that defies traditional notions of space and time, a domain of reality that is fundamentally non-local and not directly observable.

Information Transfer by Correlation is Noiseless

With no physical energy or thermal motion in the non-physical domain, there would be nothing to degrade the information. In telepathy and other psi phenomena, the quality of information does not degrade with distance or intervening obstacles. Therefore, as is the case with entanglement, the sharing of information across physical distance may be assumed to be noiseless.

Presence of a Memory in the Non-Physical Realm

The memory capacity in the EC is presumably immense and complete beyond imagination. This is deduced by noting that psi phenomena have demonstrated an ability to access in detail what appears to potentially be *just about any* event past or present, and apparently probable events in the future as well. Although time and space do not physically exist in the EC, spatially and temporally organized groups of elements in the physical domain can be stored in its memory. The memory in the EC also allows for the possibility to predict probable future events. Prediction would be expected if the memory were organized so as to capture sequential probabilities, analogous to the operation of organically evolved as well as artificially intelligent (AI) memory systems.

Very Long Information Lifespan

With no thermal noise in the EC, all the information stored in the EC memory could, in principle, last forever. Of possible relevance is an accepted law of conservation in quantum mechanics: information in a closed system can neither be created nor destroyed (it can be transformed). Stephen Hawking (2005) has proposed mathematical reasons why information can't be destroyed even if it goes into a black hole.

Intrinsic Information Storage

Being non-physical, there can be no consumption of physical energy to "keep the information alive." *Intrinsic information* is a type of information that is stored in a repository that does not require active maintenance or energy input. Examples of intrinsic information include the arrangement of atoms in a crystal lattice, the genetic code in DNA, and the structure of a hologram. In contrast, *volatile information* refers to data that disappears when the power is turned off. Speculating, t*he information stored in the memory component of the EC is intrinsic. Energy is not required to keep the information intact.*

In a desktop computer with non-volatile memory, energy is used to write data into the memory, as well as read it out. Is energy involved in writing updated data into the intrinsic data structure of the non-physical memory in the EC? If this data-writing process occurs in the non-physical domain, by definition, no physical energy would be available to use in this process. Energy is used in the physical domain ("EM") to change and update the configuration of matter there. But, it is assumed that the data as it updates in the EM is simply acquired into the non-physical repository in the EC without additional cost of energy.

Non-Selectivity of Information That Gets Stored

There is the question of *what information gets encoded into the memory fabric of the non-physical domain*. Since much computational information processing in a biological brain operates unconsciously, is all brain-generated

information, including information used in the regulation of heartbeat, digestion, etc., available and remembered "out there"? What about structural information about the configuration of biological bodies, which, as is seen in remote healing phenomena, can be affected by distant intention? This suggests that *everything physical, down to the smallest subatomic particle, including everything mental, down to the slightest subconscious thought,* is encoded (recorded) in the immense memory in the non-physical domain. This aligns with Bohm's theory, which postulates that the Implicate Order manages the physical domain at the level of subatomic particles (Bohm, 1980). The assumption, fantastic as it may sound, is that *psi-encoded information about everything physical and mental, across time and space, is "out there."* This is substantiated by the behavior observed in retrocognitive psi phenomena, with many confirmed examples cited in Barrington et al. (2005). (See also Society for Psychical Research, 2023). It aligns with the idea of an information-centric universe, the concept of "it from bit".

Associational Memory Organization

The behavior of clairvoyance provides strong evidence to suggest that psi information is encoded and stored using *associational organization*. It is through a *chain of associations* that a clairvoyant seems to zero in to the desired target information. In the examples presented above, Ossowiecki would start with an object associated with an event of interest. It appears that spatial and temporal proximity associations between material objects are acquired and remembered in the EC as well as the associations found in the thoughts of individuals.

How can conscious thoughts be remembered by presumably the same system that remembers inanimate configurations of matter in an environmental scene? In one case, we have *information produced in the brain*; in the other case, we have *visual configuration information about matter in the environment*. In the first case, if the configuration of the connections between all the associated neurons and their activities in the neural network in a brain are acquired into the memory in the EC, this information is sufficient to remember, via computation similar to that done in a human brain, the content of the corresponding thought. In the second case, if the proximity associations of all the atoms in a particular region of spacetime are acquired into the memory of the EC, this information is sufficient to remember, via appropriate computation, the physical and visual representation of the environmental scene.

Basic Data-Handling Functionality

Basic data-handling functionality is displayed in all the examples given above. For example, in the phenomenon of distant intention (DI), a remote healer can select a specific recipient for the healing of a specific area of the body. In this action, specific information regarding the identity of the recipient is apparently needed to vector specific information about what needs to be done in a "push"-type psi information transfer. Such a remote healing transaction might occur as follows: The healer produces information that includes the specific attributes of the receiver as well as "payload" information, which has the ability to heal a specific part of the specific recipient's body. The content of the information and the strength of the intention that accompanies the psi-encoded information in the thought allow it to pass through the recipient's filter (see Figure 3) that blocks irrelevant and unneeded psi-encoded information from overwhelming the receiver. The filter is set by expectations in long-term memory (LTM) and short-term memory (STM). No movement of any actual "signal" from one physical location to another is assumed to occur. Rather, the information comes directly from the spaceless and timeless "cosmic hologram".

In a "pull"-type psi information transaction, a clairvoyant may focus on the attributes of the desired target information to select and read directly from the holographic memory in the EC. This amounts to a selective associative search process controlled by a receiver. The process first accesses the information associated with the starting-point information, for example, a "link object" consisting of a bit of hair from a missing person. In the "cosmic database", the hair is associated with the missing person, which then associates to the environmental scene where the person is located. This amounts to a memory search involving a chain of associations – an "associational search".

The same type of search process occurs in the human brain. For example, in the cognitive process of generating speech, we find a specific word by thinking first about its attributes – implementing an associational search to get to the desired word. The production of speech searches for information in the brain's memory. Analogously, clairvoyance searches information in the vast memory "out there" in the EC.

The ability to mediate both "push" and "pull"-type apparent data transfers are basic types of *data-handling functionality* assumed to operate in the non-physical realm.

Absence of Gravity/ Absence of "Flow of Time"

By definition, the non-physical domain operates outside of spacetime. Without physical content, the EC

does not contain any physical matter-energy. According to Einstein, the presence of matter-energy produces gravitation. Therefore, there would be no gravity in the non-physical domain. Einstein has also shown that physical time is malleable and that the more powerful the gravitational field in a region of space, the slower the relative rate of time in that region. With zero gravity, one might expect the rate of time in the non-physical domain to be infinite. There is only the *present* in the non-physical domain (as well as in the physical domain). An infinite rate of time supports the assumption that any information entering the memory in the non-physical domain in the present can correlate instantaneously throughout the entire domain.

Non-Physical Information Has No Format

When we perceive or think of something, say an orange, the neurons that produce specific visual information in various brain centers, as well as specific taste information, auditory information (the sound of the word "orange"), and other associated memories, become active to the degree that they are relevant. This specific information is now represented as a set of relatively activated neurons in the neural network structure of the brain. This neurologically generated information can be specified by an *activation profile of a specific brain structure*.

However, what if one considers *the pure information by itself* in isolation from the neurological structure that produced it? This is assumed to be the information that enters the content of the individual's consciousness. This notion of *pure information* is *abstract.* We might say that *pure information* simply *is,* or it is *self-declaring,* or it is *formatless.* Yet, it has *content* which can be described by a *mathematical structure.* It can also be emulated in a suitably configured artificial intelligence (AI) neural network.

Formatless information is information that is independent of the specific structure that generates it. In this sense, it is "universal" – it is agnostic to any specific brain structure. This would make it easier for thought sharing to work across different brains with different "wiring" structures. No two human brains have the same "wiring" structure, due to differences in genetics and the fact that experience continually modifies neural connections. But, formatless information could be shared between, for example, a human and an animal. Sheldrake and others have produced evidence to show that inter-species telepathy exists (Boone, 1954; Sheldrake, 2000). Alternatively, two beings sharing information telepathically could have different neural circuits which interface with a universal format in the EC.

As we understand it, all information is encoded in the physical realm as a *variation* in matter or energy across space and/or time. How might "non-Newtonian information" be encoded in a non-physical domain? One form of information that is a candidate for requiring no space, time, matter or energy, is *formatless* information, as discussed above as an abstract mathematical concept.

The idea that the universe essentially springs from mathematics or information is a concept that has been discussed by philosophers and thinkers throughout the ages. Plato proposed the concept of *mathematical realism*, in which abstract mathematical entities exist independently of the physical world and form the basis for reality. Max Tegmark, a contemporary physicist and cosmologist, has proposed the "Mathematical Universe Hypothesis" (Tegmark, 2008). This theory suggests that the universe is not merely *described* by mathematics, but *is* mathematics - a *mathematical structure.* Such a reality, Tegmark argues, has *no baggage.* A *mathematical structure* that has no "baggage" describes "abstract entities with relations between them" (Tegmark, 2008, p. 2).

However, information, when rendered as conscious thoughts, definitely has variation over time, for example, when thinking about a particular song. Thoughts are understood in neuroscience to be accompanied by a varying activation pattern of neurons in space and time in the physical neural network of the brain. This can explain the variation found in the content of thought. In starting from a non-physical domain where information is represented by abstract mathematics and ending up in the physical domain where information is represented by variations in neuronal activation patterns, we are left with the need to implement some form of *data expansion* which operates on a presumably formatless thought that resides in non-physical memory and transforms it into a thought with spatial and temporal extension in physical memory. Conversely, some form of *transformation operation* would be required to render a physically expressed thought into its potentially formatless representation in non-physical memory. These operations might occur naturally as part of the fundamental way in which the universe works, but nevertheless, they would appear to involve some form of *computation.*

This thinking leads to the idea that formatless information in non-physical memory would be assumed to have the ability to be transformed into whatever format is required by a destination physical LTM-STM memory for the information. Such a transformation might occur in the non-physical domain, the physical domain (the brain), or both.

Complex Computational Processing is Supported in the Non-Physical Domain

The above considerations about the possible requirement to computationally pack and unpack information across the two types of memory, non-physical and physical, coupled with behavioral evidence which indicates the operation of computational capacity which acts to fulfill needs, as discussed in the last example (7) above, indicate that in addition to supporting an immense memory, the EC supports *computational resources*. It is noteworthy that Tegmark augmented the Mathematical Universe Hypothesis with a corollary: "The mathematical structure that is our external physical reality is defined by computable functions" (Tegmark, 2008, p. 20). These considerations support the possibility that the non-physical component of our universe can be described in terms of a mathematical structure with computational capability.

The Universal Mind May Have "Universal Consciousness"

Every *individual mind* appears to have a form of consciousness. If a *region of* the *universal mind* is responsible for the content of consciousness of an individual, the EC would be expected to support the sum of information in individual consciousnesses. When consciousness is experienced in a particular region of the EC, it might be experienced simultaneously both in the *universal mind* and in an *individual mind*. In other words, that consciousness would be represented as *part of a holistic information space*. When an individual thinks a thought, the individual experiences the conscious awareness of that information, and the same information is available in all regions of the hologram, hence, all regions of spacetime. It should be noted, following the thinking expressed in Maharaj (1981), that consciousness cannot contain a representation of the deeper reality from which it emerges. For this, the third aspect of the *source* (Figure 3, "ES") is reserved.

The Universal Mind May be Capable of Perception

Every known conscious entity has some form of *perception. A universal mind* may be capable of perceiving the perceptions of all conscious beings. For example, a dolphin has a refined sense of sonar which it can use to "see". *The universal mind* may have the ability to become conscious of what this kind of perception feels like. An *individual's consciousness,* limited by the particular senses available, cannot perceive and, therefore, is not capable of experiencing sensory information that is outside the scope of the operation of its senses. This suggests a potential difference between *the individual* and the *universal mind*.

Local Consciousness is Different Than Universal Consciousness

A *local mind* has a *consciousness* that is conditioned by and limited to its particular sensory-cognitive apparatus. In this sense, *local consciousness* is not *universal consciousness.* Maharaj (1981) has discussed the limitations of consciousness and the mind in general. Even though *universal consciousness* appears able to record and possibly experience the conscious perception of a dolphin's sonar, *individual human consciousness* cannot experience it. However, for so-called "realized" individuals – in a stable state of higher awareness and spontaneity – it may be possible:

> I find that somehow, by shifting the focus of attention, I become the very thing I look at and experience the kind of consciousness it has ... I call this [the] capacity of entering other focal points of consciousness [...] (Maharaj, 1981, p. 204).

DISCUSSION

In a verified case, Ossowiecki, in Poland, using a sealed envelope with written material inside as a cue, was able to accurately access a rather unremarkable stream of events that occurred weeks earlier in a two-story house in Spain. In another case, Ossowiecki was apparently able to accurately access visual information regarding a past event in outer space involving matter but no living beings. His report was consistent with how meteors are formed. Alternately, he might have imagined that visual event, but he has accurately reported past information in cases where people were present to confirm them. Information access of purely environmental scenes is common in clairvoyance. And we have seen an example where specific (potential) future events were apparently accessed ("You will marry a Russian woman named Lydia"). Another case demonstrated that it is possible to access visual information imagined by another individual ("Did you just put a six out there?"). The biology of organs can be affected by distant intention (DI), and it appears that the free will of individuals can, in certain situations, be overridden by apparent intelligent computations by processes that occur "out there" (Mayer, 2007, p. 21: "I was utterly astonished to watch myself defeating my own purpose"). How can all these behaviors be understood?

The "Akashic Record" in Theosophical philosophy (Leadbeater, 1968) is thought to contain all knowledge and information about the past, present, and future. It is believed to contain the record of every event, thought, emotion, and experience that has ever occurred in the past, present, and potentially in the future. The information in this record is believed to be accessible by suitably

sensitive individuals. Laszlo proposed the existence of an "Akashic field" or "A-field" as an information field at the heart of the cosmos – the "holographic memory of the universe" (Laszlo, 2004, p. 56). Di Biase (2023, p. 165) hypothesized that "Our mind is a subsystem of a universal hologram, accessing and interpreting this holographic universe." "Nothing in this world is evanescent; all things continue to exist through the traces they leave in the cosmic information field" (Laszlo, 2004, pp. 161-162). Psychic Edgar Cayce said, "Conditions, thoughts, activities of men in every clime are things... They make their impressions upon the skein of time and space. ... [T]hey become as records that may be read by those in accord or attuned..." (Cayce & Cayce, 2004, p. 67).

Whether it is called "Akashic Record," "cosmic information field," the "holographic memory of the universe" or the "memory" in the "expanse of consciousness/universal mind", these terms all refer to the same basic concept: an immense information repository with, amazingly, *all the information, both physical and mental, pertinent to this universe*. Considering all the evidence, how can one deny the existence of an information repository well-described as being "out there"? The data show that psi-encoded information is available everywhere on earth. It has not yet been proven that the speed of psi-encoded information correlation is faster than the speed of light, or that it is available everywhere in the physical universe, but such assumptions do not contradict the data. In the case of information correlation in the phenomenon of quantum entanglement, correlation speed has been measured to be *at least* 10,000 times faster than light (Yin et al., 2013), and theoretically, its speed is instantaneous (Caltech Science Exchange, 2022).

A *memory* does not generally exist in isolation; it exists as part of a larger system which puts the memory to use. In biological organisms, the function of memory is embedded in brain physiology which includes senses. The human brain, a biological organ, can be conceptually partitioned into the information stored in it and the system that operates on that information. Analogously, the *expanse of consciousness/universal mind* (EC) can be viewed as containing a system with an information storage component (*memory*) and a process that operates on that information.

When neural networks are built at large scales and trained with large amounts of data, what emerges in a way not yet understood is "creative intelligence". This has been observed in the current state of development of artificial intelligence (AI) technology. The information managing component of the EC might be viewed as analogous to a very large-scale AI neural network system. Such an AI system would, in principle, be able to emulate the behavior observed in the examples given above. The notion of a giant computer at the heart of a simulated reality, called the "simulation hypothesis," has been proposed (Bostrom, 2003). In essence, it suggests that we might be living in a kind of virtual reality. The alternative would be a "natural explanation" to explain the behavior observed in the examples.

The examples presented above demonstrate that what is "out there" includes a *memory* in which potentially unlimited psi-encoded information exists, which can be accessed by some (if not all) individuals. More than a *memory* alone, there appears to be a sophisticated *information handling system* "out there" which shows evidence of an ability to perform cognitive processing and creative thinking. What is 'out there' may have consciousness.

These notions don't fit in perfectly with the purely materialistic scientific paradigm that is the current scientific "party line" expressed in the West, but the data force us to accept that the information is "out there", where it can't be found with instruments, and where it is processed in various ways. The current materialistic paradigm *must be extended* to include a domain that exists outside the bounds of what is considered physical and contains an immense psi-encoded information repository and handling system. If physical reality indeed coexists and interfaces with such a non-physical domain with non-Newtonian information, it nonetheless would leave most of the current scientific paradigm intact. And it would enrich the current scientific paradigm by allowing for the existence of so-called "psychic abilities" as natural phenomena.

> Consciousness is that dimension which is neither physical nor is it electrical nor is it electromagnetic... [It is] a non-physical dimension. It is the non-physical in whose lap the physical is happening. Physical is a small happening... Not even one percent is physical. The rest is non-physical (Sadhguru & Shetty, 2020, timestamp 2:39).

The simple question posed at the beginning asked, "where is 'out there?'" After the considerations discussed above, an answer can be given: "Out there" is in the non-physical *expanse of consciousness/universal mind*. This "domain", or "realm", or "expanse" is distinct from the relatively well-understood *expanse of matter-energy* which is the "physical domain". The non-physical domain is thought to pervade, overlay, and intimately connect with the physical domain via what Bohm and Hiley (1993) might term an *active informational interface.* Furthermore, "out there" is actually "in here", in the sense of being in our individual *minds* which are part of the cosmic holo-

gram.

A critical issue becomes, how can *information* – which implies *variation* – be stored and computationally processed in a domain without physical matter, energy, space and time? What is the recording medium if there is nothing physical in the domain? Plato proposed the concept of a realm of abstract forms, including mathematical forms, which exist independently, and that the material world is a shadow or imperfect representation of these forms. Pythagoras believed in the mathematical and numerical basis of reality. Galileo stated that the universe is a grand book written in the language of mathematics. Bohm and Hiley (1993) theorized an "Implicate Order" which "informs" the "Explicate Order" via "active information." Wheeler proposed "it from bit". Tegmark proposes an abstract mathematical structure with "no baggage" which can, in principle, encode variation. This is a partial list of thinkers and traditions that propose what amounts to an *abstract information structure* as a core principle in our universe.

The issue of free will also comes to the fore. What does the ability to access events in the future (precognition) imply for free will ("You will marry a Russian woman named Lydia")? Note that the human cognitive system, with its knowledge of sequential probabilities, makes predictions all the time. The predictions are probable and potential. It is possible that information about the future developed in the EC works the same way as future prediction works in the human brain. With so much more information available in the EC than in an individual brain, EC-based future predictions would be expected to be significantly more specific and accurate. The idea of free will is also questioned by what appears to be EC-based control of the "willful" behavior of individuals in real-time so as to "fulfill needs" (Example 7 above).

The purpose of science is to study and understand every phenomenon that is real. The examples cited above provide strong evidence that a non-physical domain exists. Science needs to understand its workings. It is time to acknowledge its reality, extend our belief system accordingly, and move on.

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APPENDIX

Ten Proposed Features of the Non-Physical Domain

1. Its operations occur in the *present* (real-time operation).
2. It contains a *memory* with the capacity to remember all structural configurations, physical events, and thoughts. Real-time information pertinent to everything in the physical domain is continually acquired into this *memory.*
3. Its memory storage is intrinsic (non-volatile).
4. The memory may have *a hierarchical associational storage organization* like the human brain's memory organization.
5. The information stored in non-physical memory is assumed to be "pure" and "formatless": a mathematical structure that can be unpacked via computation into any destination format.
6. The domain operates outside of time and space and interfaces informationally with everything in physical time and space.
7. The domain supports basic low-level data-handling functionality, for example, apparent "push" and "pull" type correlations of information from one geolocation to another.
8. It supports instantaneous holographic-style distribution of all information in memory for total access via correlation everywhere.
9. Information processing in the non-physical domain can result in *need fulfillment* and other cognitive processing functionalities such as prediction and creative thinking.
10. Universal mind may have consciousness. When information in universal mind activates and becomes conscious, it may simultaneously become conscious in a region, which is the local mind of an individual.