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EDITORIAL

A Festschrift for a Consciousness Hummingbird:

Charles T. Tart¹

Etzel Cardeña

Lund University



Abstract: Charles Tart was arguably the most important theoretician and researcher of altered states of consciousness (ASC) during the second half of the 20th century. His vast output included books and articles extending the frontiers of study of states of consciousness in general, and of the hypnagogic state, dreaming, meditation, hypnosis, and minor and major psychedelic drugs, among others. Rather than a specialized scientist, he was a fast and agile hummingbird who did not visit only a flower or two but extracted noetic nectar from many more and proceeded to pollinate a wide field of study that had mostly lain barren since the early contributions by William James and a few others. In this editorial I provide a general introduction to his work and its influence on mine.

Keywords: Charles Tart, consciousness, altered states of consciousness, anomalous experience, anomalous cognition, parapsychology

The university library was a refuge during the dense hours of wait between the first and second lectures in my Mexican alma mater (our home was 1-2 hours away by multiple buses, so I would arrive early in the morning and stay on campus until night). My interests were wide and disperse and I recall reading excellent books about Kafka and about the sociopolitical influences in art. Simultaneously I worked as an actor in classical

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plays and, more to the point, was a member of a group of practitioners of transcendent ritual theater. During some of the dizzying activities of the *Taller de Investigación Teatral*, which continues its activities to this day, my consciousness was radically transformed and I was able to achieve a bodily know-how and imperviousness to pain that had been unknown to me (Cardeña, 2019). My psychology textbooks and courses did not help me understand the extraordinary experiences (not drug induced, by the way) I was having, as the only other states they mentioned were sleep and intoxication, under the assumption that any other state than the waking one was delusional if not outright pathological. The university library, though, came to my rescue and offered me two books that changed my life: Robert Ornstein's *The Nature of Human Consciousness* (1973) and Charles Tart's epoch-making anthology *Altered States of Consciousness* (1969).

Ornstein's book had 41 chapters (with two contributions by Tart, one on state-specific sciences and one on the nature of psi) that challenged a narrow, rational view of science and human consciousness. It emphasized what Ornstein called "two modes of consciousness" (including the then novel split-brain research by Sperry, Gazzaniga, and others), along with meditation and Sufism. Tart's book was not as programmatic and included papers on general considerations of states of consciousness (including a concise but amazingly rich discussion of altered state by Ludwig, 1966), the hypnagogic state, dreaming, meditation, hypnosis, minor and major psychedelic drugs, and the psychophysiology of some altered states. Not only did Tart's book become a widely influential academic classic (close to 2,000 citations according to scholar google in August, 2023), but his work reached an avid general public looking for serious discussions of alterations of consciousness and Eastern philosophies and practices. For instance, in Ken Russell's film *Altered States* (1980), the main character, portrayed by William Hurt and modelled after another noetic explorer, John C. Lilly, mentions Tart as one of only a couple of researchers doing interesting work in the area, a scene that thrilled me when I watched

it in a Toronto cinema before actually going to work with Tart at the University of California, Davis.

Those two books and conversations with two inspiring professors in México revealed that my future as a psychotherapist was not as enticing as gaining a better understanding of the alterations of consciousness I was experiencing during my theater activities. I had previously decided that I should do graduate work in a better university and ambitiously set my sights on working with Tart in the US. It took me three tries (and an M. A. in clinical psychology from York University in Canada) before I could be supervised by him with the financial assistance that I needed to support my studies as his (last) doctoral student at UC Davis. Previously I had written letting him know of my interest and, not knowing better, boasted that I had read most of his works. In reality, I had read his two main books on ASC plus a few papers, which is what I thought was the typical academic output, instead of the more than a hundred papers he had published by that time. He kindly responded with a letter recommending that, for pragmatic reasons, one should become an expert in an accepted topic before researching unorthodox areas such as psi, an advice that I now pass to those who write to me wanting to be my students.

Besides his epoch-making anthology, Tart's contributions have ranged widely across the whole spectrum of altered states. To mention but a few of them (doing justice to all would require a whole book): a still widely relevant and not sufficiently-mined systems theory on ASC (Tart, 1975); a phenomenological study of marijuana experience (Tart, 1971); a radical methodological proposal to create state-specific sciences, published in *Science* (Tart, 1972); papers on various aspects of hypnosis (e. g., Tart, 1970; which inspired my own doctoral work and later studies, e. g., Cardeña, 2005; Cardeña et al., 2013); pioneering studies of out-of-body-experiences (e. g., Tart, 1998); and works on dreaming, lucid dreaming, mindfulness, meditation, and how to test the ontological validity of aura perception (see <https://blog.paradigm-sys.com> for a list and description

of many of his works). It is such a vast and rich oeuvre that just trying to take the measure of it is overwhelming. His important work on transpersonal psychology is discussed in this issue of *JAEX* by Paul F. Cunningham and that on parapsychology (psi or anomalous cognition) by Dean Radin.

As to the title of this editorial... People who know Tart (or Charley, as he likes to be called) might be surprised that I describe him as a “hummingbird,” but let me explain my metaphor. Charley has had a heterodox career in the many types of scholarly activities he has brilliantly engaged in, from researcher and theoretician –particularly in the first decades– to pragmatic thinker –in the last few. Most academics would be happy to excel in one area or activity, whereas he has been a trailblazer in many of them. He might have stayed an eminent researcher and theoretician, say, in hypnosis (he held a postdoctoral position at Stanford with one of the giants of the field, Ernest Hilgard), but he also researched many other induction techniques and alterations of consciousness, authoring books and papers with well-thought proposals about the general nature of states of consciousness and how to define and study them. He would then focus for a while on a specific alteration before shifting to study another, while also bringing psychological insights into the study of the psi hypothesis. For me, it is as if he has been a noetic hummingbird, not resting too long on any specific flower (or state of consciousness), but extracting noetic nectar from many different species before proceeding to pollinate a wide field that had mostly lain barren since the turn of the century contributions by William James and a few others.

It is with personal and professional pride that *JAEX* dedicates this editorial and the following two articles to the 85th birthday of Charley last year (and to the memory of his beloved Judy). Gracias, Carlitos, for being my supervisor and then friend all these years.



Carlitos donning a Haitian hat that the author shared with him circa 1988

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Eine Festschrift für einen Bewusstseins-Kolibri: Charles T. Tart Etzel Cardeña

Zusammenfassung: Charles Tart war wohl der wichtigste Theoretiker und Untersucher von veränderten Bewusstseinszuständen (ASC) in der zweiten Hälfte des 20. Jahrhunderts. Sein umfangreiches Werk umfasst Bücher und Artikel, die die Grenzen der Erforschung von Bewusstseinszuständen im Allgemeinen, des hypnagogischen Zustands, des Träumens, der Meditation, der Hypnose, kleinerer und größerer psychedelischer Drogen usw. erweitern. Er war kein spezialisierter Wissenschaftler, sondern ein schneller und wendiger Kolibri, der sich nicht mit ein oder zwei Blüten begnügte, sondern den noetischen Nektar aussaugte, um dann ein weites Forschungsgebiet zu bestäuben, das seit den Beiträgen von William James und einigen anderen um die Jahrhundertwende größtenteils brach gelegen hatte. In diesem Editorial gebe ich eine allgemeine Einführung in sein Werk zusammen mit seinem Einfluss auf meines.

German translation: Eberhard Bauer

Festschrift Celebrando um Beija-flor da Consciência: Charles T. Tart Etzel Cardeña

Resumo: Charles Tart foi, seguramente, o mais importante teórico e pesquisador dos estados alterados de consciência (EAC) na segunda metade do século XX. Sua vasta produção incluiu livros e artigos ampliando as fronteiras dos estudos sobre estados de consciência em geral, estados hipnagógicos, de sonhos, da meditação, da hipnose, das drogas psicodélicas de menores e maiores efeitos, entre outros. Mais do que um cientista especializado, ele foi como um rápido e ágil beija-flor que, ao invés de se contentar com uma ou duas flores, extraiu o néctar noético e, então, passou a polinizar um amplo campo de estudos que, em sua maior parte, estava estéril desde as contribuições de William James, e alguns outros, na virada do século. Neste editorial, apresento uma introdução geral ao seu trabalho e sua influência sobre o meu.

Portuguese translation: Antônio Lima

Un Festschrift Para un Colibrí de la Consciencia: Charles T. Tart Etzel Cardeña

Resumen: Charles Tart fue posiblemente el más importante teórico e investigador de los estados alterados de consciencia (ASC) en la segunda mitad del siglo XX. Su vasta producción incluyó libros y artículos que ampliaron las fronteras de estudio de los estados de consciencia en general y de los estados hipnagógico, de sueño, de meditación, de hipnosis, y de drogas psicodélicas menores y mayores, entre otros. Más que un científico especializado, fue un rápido y ágil colibrí que no solamente visitó una o dos flores sino que extrajo el néctar noético de muchas para luego proceder a polinizar un amplio campo de estudio que, en su mayor parte, había permanecido estéril desde las contribuciones de William James y algunos otros. En esta editorial ofrezco una introducción general a su obra y su influencia en la mía.

Spanish translation: Etzel Cardeña

A Transpersonal Festschrift to Honor Charles Tart on his 85th Birthday¹

Paul F. Cunningham

Rivier University

Abstract: This summary honors Charles Tart on his 85th birthday by reviewing his contributions and the influence of his work in the subdiscipline of Transpersonal Psychology. Six contributions are reviewed, namely his vision of Transpersonal Psychology as: (a) a science of Mind and Spirit, (b) a critical psychology, (c) an empirical, non-churchly approach to religion as spiritual psychology, (d) a state-specific science of exceptional human experience, (e) an evidence-enriched science of spirituality grounded in the scientific foundations of experimental parapsychology, and (f) a psychology of human possibilities to help individuals overcome obstacles to growth.

Keywords: Charles Tart, transpersonal psychology, science, spirituality, parapsychology, personality growth, anomalous experience, anomalous cognition

Highlights

- Identifies six foundational contributions to transpersonal psychology
- Describes an evidence-based science of mind and spirit
- Discusses the state-specific science of transpersonal experience
- Explains why parapsychology is a transpersonal concern

Charles T(heodore) Tart, Emeritus Professor of Psychology at the University of California, Davis, and at the Institute of Transpersonal Psychology (now Sofia University, Palo Alto), is one of the founders of contemporary Transpersonal Psychology. His first article published in *The Journal of Transpersonal Psychology*, the flagship journal of the field, was on the topic of the transpersonal potentialities of deep hypnosis (Tart, 1970). His second and third articles, published the following year, discussed state-specific sciences as an empirical approach to the study of alternate states of consciousness (Tart, 1971a) and his personal experience engaged in a year-long meditation practice (Tart, 1971b). He

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joined the *Journal's* Board of Editors in 1975 and has remained a professionally active contributor ever since—his most recent contribution a reflection on the life of friend and fellow founder Arthur J. Deikman (Tart, 2016a), with whom he co-authored an article on mindfulness, spiritual seeking, and psychotherapy in the early 1990s (Tart & Deikman, 1991). In 2007, he was nominated by his peers as “one of the most influential figures in transpersonal psychology’s history” (Ruzek, 2007, p. 156).

Professor Tart tells us that he has led three professional lives: “One life was as experimenter and investigator of consciousness... My second professional life was as a parapsychologist... My third professional life was as a transpersonal psychologist” (Tart, 2009b, pp. 47-49). He notes, “identifying myself as a transpersonal psychologist, with a specialty in parapsychology, is one way in which I integrate my varied interests and try to broaden parapsychology. Under other circumstances, of course, I am quite happy to identify myself as a parapsychologist with a specialty interest in transpersonal psychology” (p. 40). His blog and website offer the interested reader free access to full texts of many of his scholarly works on various topics, including alternate states of consciousness, dreams, hypnosis, meditation, mindfulness, parapsychology, personal growth, spirituality, survival of death, and “how to be both a scientific person and a spiritual seeker” (<https://blog.paradigm-sys.com/welcome/>).

The idea that one can be both a scientist and a spiritual seeker at once is one of his most enduring contributions to Transpersonal Psychology. He tells us that his childhood religion, Lutheranism, and science were “two major forces in my becoming a transpersonal psychologist” and that the idea of applying “the *methods* of science to the phenomena of religion and spirituality... has been the central theme of my professional work and personal life ever since” (Tart, 2016b, p. 3). He is a firm believer that science is not prohibited from investigating so-called “supernatural” claims and that “the methods of essential science can help us clarify many things in the spiritual area” (Tart, 2016b, p. 12). Science and spirituality at their root are not isolated or specialized activities, in his view,

and these two ways of thinking and living need not be contradictory or incommensurable *unless you believe that they are*. “I was proud,” he said, “to be *both* scientific *and* spiritual in my professional and personal approaches to life” (Tart, 2009b, p. 32). Science can be a spiritual practice and spirituality a characteristic of any pursuit that searches for the nature of meaning and truth, including science (see also Anderson, 2018; Barušs, 2007).

Six Contributions to Transpersonal Psychology

The formal birth of Transpersonal Psychology (capitalized as a proper noun to emphasize its distinctiveness as a subdiscipline of psychology) has been traced to several events. Some point to September 14, 1967 when Abraham Maslow made first public reference to the emergence of a “‘transhumanistic psychology’ dealing with transcendent experiences and with transcendent values” in a lecture given under the auspices of the Esalen Institute at the First Unitarian Church in San Francisco (Maslow, 1969, p. 4). Others trace the field’s beginning to 1969 with the publication of the first peer-reviewed academic journal of the field, *The Journal of Transpersonal Psychology*. For me, the emergence of the field fully dawned in 1975 with the publication of Charles Tart’s book, *Transpersonal Psychologies: Perspectives on the Mind from Seven Great Spiritual Traditions* (Tart, 1975a). It is here that we find many of his key ideas that have served as fertile soil out of which the emerging subdiscipline of Transpersonal Psychology would grow into a psychology for the 21st century. These include his vision of Transpersonal Psychology as: (a) a science of Mind and Spirit, (b) a critical psychology, (c) an empirical, non-churchly approach to religion as spiritual psychologies, (d) a state-specific science of exceptional human experience, (e) an evidence-enriched science of spirituality grounded in the scientific foundations of experimental parapsychology, and (f) a psychology of human possibilities capable of helping individuals overcome obstacles to human growth. These six contributions and the influence of Charles Tart’s work are briefly discussed below.

A Science of Mind and Spirit

On the occasion of his reception of Division 32's (Humanistic Psychology) Abraham Maslow Award in 2004 for his work in "the furtherance of the human spirit," Tart articulated his vision for both Humanistic and Transpersonal Psychology: "To help move psychology in a direction where it is once again, both theoretically and in applied ways, a science of the *mind*. Indeed, to move far enough that psychology also becomes a science of the spirit and, perhaps, to use that uncomfortable word, a science of the Spirit" (Tart, 2005, p. 133). He contends that mind and spirit have a reality of their own that need to be studied on their own terms and emphasizes the primacy of experiential data in their investigation (i. e., data of sense and data of consciousness). The challenge for psychology in implementing a viable and authentic science of Mind and Spirit is to discover and explore the operation of a spiritualized element in ordinary life and make it accessible in people's *conscious* experience so that empirical (i. e., experiential) evidence of its reality can be obtained and replicated in the experience of others (Tart, 2001, 2019). As part of that project, he urges further research into: "(a) how to induce healthy transpersonal experiences, (b) how to maximize healthy integration of transpersonal experiences into everyday life, and (c) how to treat and minimize transpersonal pathology (everything that appears transcendent is not necessarily true or healthy)" (Tart, 2006, p. 85).

In Charles Tart's view, "transpersonal psychology is a discipline working toward developing an *evidence-based* spirituality.... Creating an evidence-enriched spirituality is one of the most important activities we can undertake, if not *the* most important!" (Tart, 2009b, pp. 40, 53). In alignment with the radical empiricism tradition of American philosopher-psychologist William James, he argues that it is the field's "insistence that *data*—observation, direct experience—is *always* primary, *always* takes precedence over

theory [that] will provide a firm foundation for advances in understanding and application in the field" (Tart, 2006, p. 85). The science of Mind and Spirit that he proposes is an empirical science (i. e., from Greek ἐμπειρία *empeiría*, meaning "experience") that regards "experience as one kind of fundamental data just as fundamental as physiology or behavior" [emphasis in original] (Tart, 2019, p. 366).

He recognizes that "there are many kinds of spirituality and spiritual experiences that must be considered as data in developing a more comprehensive theory of the spiritual" (Tart, 2009b, p. 45). By "spiritual," he refers to that which "points toward ultimate values and meanings primarily involving nonphysical aspects of reality" (p. 43). In Tart's view, "total, blanket dismissal of any possible reality to the spiritual is bad science" (p. 50). We "must deal with *all* the data, not just the convenient parts," he states, and remain "faithful to the full range of human experience" (Tart, 2005, p. 134). This includes experiences whose content seem to reveal that there is a transcendent dimension to reality that exists independently of the material world and sensory human experience (Tart, 1989, 1997b).

A Critical Psychology

Charles Tart is one of the first transpersonal psychologists to call attention to a particular brand of science grounded in what he termed the "Western Creed" (Tart, 1992, pp. 78-82)—also known as "materialistic scientism" (Tart 2004) and "Dismissive Materialism" (Tart, 2009a)—that rejects any possible reality to the spiritual. It is a philosophic stance consisting of a set of assumptions about the nature of reality, human knowing, and value-fulfillment that have come to dominate much of orthodox, mainstream Western psychological thinking and which have practical consequences on the human spirit. These assumptions (for example, only physical reality is real; all perception is through the physical senses; life, mind, and consciousness are nothing but the chance byproduct of lifeless chemical elements mindlessly coming together in an

uncaring, purposeless, and mechanical universe that was itself accidentally created) often go unquestioned because of prior socialization and conditioning and subsequently take on the appearance of facts *of* existence rather than beliefs *about* existence. By making those assumptions explicit, Charles Tart has helped students of psychology become better able to *consciously* examine and critically evaluate their practical consequences and theoretical implications so that alternative understandings of life, mind, and consciousness can be conceived and explored.

“Too many professional scientists,” he states, “have too narrow a view of reality and practice *scientism* [i. e., materialistic science functioning as dogmatic religion] rather than essential science [i. e., the open-ended cycle of observation, theory/prediction, testing, intersubjective validation]” (Tart, 2005, p. 131). He came to recognize that psychology’s determination to be like the physical sciences has brought about a relatively narrow kind of science that has resulted in a certain artificial shrinking of the basic reality of subjective life to those aspects that can be studied in an exterior fashion and a scaling down of those creative (paranormal) abilities that lie latent but active within each person and within the species. The more he explored the profoundly rich and multifaceted phenomenon of consciousness, the more he realized that orthodox Western psychology, by what it said and neglected to say, has helped to create insanities that otherwise would not have plagued our world. By denying our species the practical use of those very elements needed to remain heathy in body and mind—the feeling that we can trust ourselves and that our being and our actions have meaning and purpose—mainstream psychology has played an important negative role in undermining personal integrity and contributing to the troubles of society. His life’s work has been devoted to remedying this unfortunate situation and inspiring the younger members of our profession to “look at what’s implicit or assumed in questions and ideas” (Tart, 2016b, p. 7). Tart’s open espousal and promotion of this critical stance is another important

contribution that has made Transpersonal Psychology one of the critical psychologies (Friedman & Hartelius, 2013).

Religions as Spiritual Psychologies

A third contribution to Transpersonal Psychology is Tart’s construal of world religions and various spiritual systems as forms of “psychologies” that offer alternative assumptions to those of materialistic scientism (Tart, 1975a, Chapter 2). In his view, spiritual psychologies are “transpersonal” in the sense of “temporarily transcending our usual identification with our limited biological, historical, cultural and personal self and, at the deepest and most profound levels of experience possible, recognizing/being ‘something’ of vast intelligence and compassion that encompasses/is the entire universe” (Tart, 2002, p. 39). Maslow (1968) characterized such psychologies “centered in the cosmos rather than in human needs and interest, going beyond humanness, identity, self-actualization, and the like” as *transhumanistic* (pp. iii–iv). Bridging transhumanistic spirit and psychological science has long been an important element in Tart’s transpersonal vision for the field. One concrete application of his vision of “building bridges between essential science and essential spirituality” was his *The Archives of Scientists Transcendent Experiences* website (continued under <https://www.aapsglobal.com/taste/>).

Tart is not afraid to speculate about the existence of a spiritualized element of human personality or to actively probe possible realities that underlie human spirituality (Tart, 1989, 1995, 1997b). Some transpersonal scholars may believe that such speculation has no place in any psychology that would call itself “scientific” and prefer to remain agnostic about whether anything *real* is happening. Not so Charles Tart! He argues that the “scientific” difficulty of establishing a viable and authentic science of Mind and Spirit is no reason for not trying. Nor is it a reason for ignoring or rejecting out of hand evidence for the ostensible ontological reality of certain exceptional human experiences (e. g.,

telepathy, clairvoyance, precognition, psychokinesis, psychic healing) that seem to reveal something of the essential nature of being or existence (Tart, 2009a). In his view, it is through following the data and remaining open to all avenues of productive scientific speculation and intuitive possibilities that the knowledge quest will be fruitfully advanced. This requires that we keep an open mind because, as he put it, “accepting any worldview and spiritual goal as final, ultimate Truth, may seriously discourage you from looking for alternatives that might even be more valuable, and certainly a part of reality” (Tart, 2016b, p. 13ff). His advice remains psychologically sound: “Practice a little humility and remember that we may not be smart enough to figure everything out” at this stage in our knowledge of the transpersonal nature of human psychology (p. 7).

State-Specific Sciences of Transpersonal Experience

A fourth contribution to Transpersonal Psychology is Tart’s proposal of “state-specific sciences” that utilizes the method of essential science to advance understanding of the basic reality of subjective life (Tart, 1976, 1995, 2008). He tells us that he considers this proposal to be his “most creative contribution” to the study of consciousness and a way of doing scientific work that expands our view of reality by using the different perspectives available to us in various alternate states of consciousness (Tart, 2009b, p. 47).

Many exceptional (transpersonal) experiences—for example, mystical/unitive experiences, psychic/paranormal experiences, encounter-type experiences, unusual death-related experiences (Palmer & Braud, 2002)—display what are called “state-dependent” effects whereby information acquired in one state of consciousness is forgotten in another state, but recalled again when the initial state in which the information was originally acquired is reinstated. In a bold, evocative, and innovative theory for its time, Tart proposed that such state-dependent experiences are best investigated using a state-specific sciences paradigm that involves the scientists

entering into the state of consciousness that they wish to investigate as participant-observers and studying it from the inside out, and not the other way around (Tart, 1972, 1975b).

Always the pragmatic scientist, Tart recognizes that his proposal for state-specific sciences was likely ahead of its time (Tart, 2009b, p. 47). Although it has yet to gain much traction in the psychological sciences or receive much practical application in consciousness studies, I believe that the situation is likely to change with the recent renaissance of psychedelic research in mainstream psychology. I also think that his state-specific sciences proposal offers a plausible way forward for the development of an empirically (experientially) controlled metaphysics of a science of Mind and Spirit that takes experience in various states of consciousness as its empirical starting point and is capable of pointing out directions in which explanatory scientific theories might be found (Tart, 1989, 1997b). The method of disciplined inquiry of the kind proposed by Tart expands psychology, not only by enlarging its toolbox of research technologies, but also by placing the hypothesis formation, research design, data gathering, and data analysis process (i. e., the data-theory cycle) within a larger framework that considers the basic reality of subjective life in a greater context, with greater motives, purposes, and meanings than traditionally assigned to it by orthodox, Western psychological science.

Early in his career, Tart recognized that unlike experiments using inanimate objects, experiments that involve active and reactive human beings who are trying to understand what is happening to them never turn out *exactly* the same way twice (Tart, 1977). He tells us that Humanistic-Transpersonal Psychology today has a major advantage here by recognizing “the personal equation” in scientific research and that the subjectivity of the researcher is always a variable in any research programme” (Tart, 2010). For scientists, the physical world would have little meaning for them were it not for their subjectivity. Research is a subjective act and the researcher’s personal

qualities inform all aspects of a scientific study, especially given the self-reflexive nature of psychology's subject matter (i. e., we are what we study). "By recognizing this," Tart notes, "we have a chance to control for bias and so be more objective" in our evaluation of the evidence that provides a basis for validating the legitimacy of spiritual experience (Tart, 2005, p. 138).

The Scientific Foundations of Experimental Parapsychology

A fifth contribution to the field is Charles Tart's open espousal of parapsychology as providing an interface between science and spirituality and the necessary evidence for empirically validating the ontological reality of certain categories of transpersonal experiences. His active promotion of this experimental science has greatly benefited its reputation within Transpersonal Psychology (Tart, 2009a, 2019). As a transpersonal parapsychologist, Charles Tart has consistently argued that parapsychological research has important implications for Transpersonal Psychology because of the scientific evidence it provides for the existence of many of the exceptional experiences that transpersonal psychologists study (Tart, 2002). He notes that many transpersonal experiences—such as near-death experiences, past-life memories, mediumistic communications, apparitions and deathbed experiences, and yogic *Siddhis*—constitute research areas common to both Transpersonal Psychology and parapsychology. The family resemblance between parapsychology and Transpersonal Psychology is emphasized in strong terms in his book *Body Mind Spirit: The Parapsychology of Spirituality*, where he discusses "how we have strong scientific evidence in parapsychology and why that gives general support to some kind of reality to a spiritual world and a spiritual life" (Tart, 1997a, p. 25).

From Charles Tart's point of view, much the same as physiology and neurology underlie medicine and physics provides the foundation of engineering, "the basic parapsychological findings of the reality of psi give a solid, scientific reality basis to our fields of humanistic and transpersonal psychology and without this backing our fields are too easily dismissed by materialists as being nothing but illusions and delusions" (Tart, 2005, p. 142). He notes that some progress has been made in gaining Transpersonal Psychology some respectability in the eyes of mainstream psychologists who may have initially looked upon the field as "Kooky California Psychology" that deals with psychic and spiritual stuff (Tart, 2009b, p. 41). More needs to be done, however, in terms of addressing the political marginalization of Transpersonal Psychology within "official" psychology, ending the perpetuation of inaccurate stereotypes of the field as unscientific, and dealing with the irrational resistance by mainstream psychologists to scientific discoveries concerning the facticity of certain transpersonal phenomena. "Mapping out these defenses, their costs, and their consequences," he observes, "will be a very useful line of future research" (p. 37).

Tart has devoted a significant part of his own professional career trying to understand why scientists resist scientific discoveries related to psi functioning and other phenomena that appear to involve an expansion of consciousness beyond usual ego boundaries and limitations of space and time (Tart, 1982, 1984). In certain respects, this resistance is understandable since both parapsychology and Transpersonal Psychology investigate phenomena that shatter the foundations of materialistic science's philosophical stance (e. g., mind affecting matter, action at a distance, nonsensory perception). Those whose job it is to maintain and defend the status quo and worldview of current scientific orthodoxy cannot afford to rebel. The problem of *anticipatory fear* (i. e., anticipating the worst possible outcome of any action) that Tart draws attention to in the context of psi functioning is not trivial. It may be one reason why transpersonal

experiences, human transformative capacities, and self-actualization are not more frequently reported in the general population. When people are frightened of themselves, frightened of their impulses and of the self who has them, fear their emotions and the opinions of others, fear looking weak or fear looking too strong, fear fear, or make fear a habit, then they can easily become immobilized and afraid to recognize, acknowledge, or use their abilities, including psi. Tart recognizes, however, that it is a fear that eventually everyone must face and a journey—the journey of the personal self through fear of the unknown—that everyone must take and its benefits used, if we are to overcome the obstacles to human potential and achieve maturity as a species.

A Psychology of Human Possibilities

This brings me to Tart's sixth contribution: His vision of Transpersonal Psychology as an applied psychology of personality growth and spiritual development. As he put it, "I am not simply interested in a psychology that is all theory and study, I want application and personal growth to come from its knowledge" (Tart, 2005, p. 140). From his transpersonal perspective, "our ordinary 'normal' biological, historical, cultural and personal self is seen as an important, but quite partial (and often pathologically distorted) manifestation or expression of this much greater 'something' that is our deeper origin and destination" (Tart, 2002, p. 39). His book, *Waking Up: Overcoming the Obstacles to Human Potential* (Tart, 1986), reminds us that the expression of this "greater something" is not beyond us, its manifestation in our work-a-day life is not illusory, and we can overcome whatever obstacles may stand in our way of "waking up"—if we give ourselves permission to do so and are flexible enough. His vision of human possibilities includes the recognition that not everything called "spiritual" is necessarily true or good. He proposes that we use the method of essential science to sort it out, find out which parts are real and healthy, investigate those, and then help people learn to have authentic spiritual

(transpersonal) experiences that challenge them to act with compassion and wisdom in their private life and take responsibility for their part in the current global crisis of our times and choose to change it.

Always the empirical and pragmatic transpersonal psychologist, Tart puts his vision of human possibilities to the test of action and further development in his book, *Mind Science: Meditation Training for Practical People* (Tart, 2001). Here he explains how a mental practice that is designed to expand awareness and perception can be an effective means of de-conditioning and a way of "waking up" from the consensus trance of ordinary waking consciousness. Using practical exercises, he demonstrates how a flexible yet disciplined ego is quite capable, *with training*, of relinquishing its dominancy during experiences of dissociation and expansion of consciousness so that information from more subliminal regions of consciousness can be meaningfully communicated and efficiently used by this most physically oriented portion of the personality. Importantly, his advocacy of meditation as a vehicle for overcoming obstacles to personality growth reflects his recognition that the personal self is capable of much more attentional capacity, open awareness, and intuitional realizations than it is usually given credit for. He does not consider the personal self as something that needs to be banished from participation in the spiritual quest or regard it as some separate, inferior portion of the Self to be booted aside by an indifferent spiritual foot. Tart's notion that we need to recognize and honor the needs of the personal ego in any spiritual path, while not limiting the type of expansion of identity possible, is an idea that has given the field of Transpersonal Psychology a necessary *balance* that a narrower approach, which views the ordinary self as something that needs to be overthrown in order to reach Enlightenment, does not permit. It is a realistic approach to transpersonal development that has helped to promote the use of meditation training as a way of teaching ordinary people how to live

more fully in the present, face their fears, and discover a source of support and insight in themselves that is arguably transpersonal (beyond ego) in nature.

His insistence that we must always make room for the individual idiosyncrasies and eccentricities of the personal self in any pursuit of so-called “ultimate states” is clearly given voice in a poem he wrote in 1992 over the course of four days as a participant at a Vipassana Retreat (Tart, 1998). In that poem, he frankly acknowledges the limitations of his personal self in reaching the grand ideal of Bodhisattvahood and offers “a promise, little [Buddysattva] p promise, not big [Bodhisattva] V Vow, that me in my ordinariness (and hopefully my superego) can live with and love with and learn from” (pp. 93-94). He goes on to describe what it means to be a good buddy (a “Buddysattva”) to one another, which may be enough for ordinary folk, like himself, who might see their yearning to follow the Path of the Bodhisattvas as too presumptuous and premature. His “Buddysattva promise” reminds us that our familiar ego-self lives *within* the framework of the psyche’s greater existence, not outside of it. It may be only one segment of our larger identity, but is still nevertheless made up of the same vital energy that composes its source and can hardly be inferior to the “greater something” that is its origin and of which it is a necessary and vital part. Its clear and exquisite focus creates a given kind of experience that is valid, real, and necessary to the life of the body and it is a portion of our identity that needs to be brought along on any journey into post-conventional (transpersonal) stages of development if the *entire* personality, considered as a gestalt, is to benefit.

Conclusion

In preparing this essay to honor the many contributions of Charles Tart to Transpersonal Psychology on the occasion of his 85th birthday, I am struck by the originality of his work, his deep understanding and respect of good scientific procedure, and his use of clear and plain language to communicate to the general public in

common sense terms the field’s most important findings and promote its scientific acceptance among his colleagues. Having recently published a textbook to introduce Transpersonal Psychology to undergraduate and first-year graduate students (Cunningham, 2022), I am impressed by how many areas of Transpersonal Psychology his work touches upon and how his work points out directions that an expanded psychology for the 21st century might follow. Charles Tart is what I would call “a practicing idealist” who strives to put his ideals into action. He does so, in his words, “first as a psychologist concerned with helping to alleviate useless suffering, second and more specifically as a transpersonal psychologist interested in people’s spiritual development, and third as an educator, where my primary tasks are to share useful information with people and stimulate their thinking” (Tart, 2009b, p. 50).

J. R. R. Tolkien (1977) wrote in *The Silmarillion*, “In every age there come forth things that are new and have no foretelling, for they do not proceed from the past” (p. 18). Charles Tart is that kind of phenomenon and, as one of the pioneering theoreticians and researchers in the field of Transpersonal Psychology, he is clearly one of its most gifted and creative thinkers. Although the notions of “science of Mind and Spirit,” “critical psychology,” “spiritual psychologies,” “state-specific sciences,” “parapsychology of spirituality,” and “psychology of human possibilities” may sound esoteric, they are highly practical constructs and, in certain terms, we are dealing with the very nature of creativity itself. By looking outside established frameworks, Charles Tart came to perceive science and spirituality in a completely new way. By going beyond previous learning and accomplishment, he opened up new areas of critical thought previously ignored in mainstream psychology. By transcending disciplinary boundaries and overcoming conceptual limitations, he gave birth to a new understanding of religion as spiritual psychologies. By trying some new venture never before attempted, he brought into existence a state-specific method of disciplined inquiry that did not exist at that time

which discloses channels of awareness and experience previously overlooked. By searching for something not believed possible, he found new sources of evidence for the interface between science and spirituality in a transpersonal parapsychology. By daring to better the existing situation, he drew attention to possibilities of growth and development not believed possible for the individual and the species. By giving birth to the new and untried, he opened up opportunities for an expanded psychology that might have otherwise gone unknown.

The six contributions to Transpersonal Psychology that I have reviewed here are only a few of the many contributions that I could have highlighted. Charles Tart always considered his contributions to be works-in-progress. As he put it, “I have no delusions that this is the final word on these subjects, of course; it’s just the best sense I can currently make of the relationship between science and spirituality, mainly through implications of the data of parapsychology. I’m a pragmatic empiricist, though, so any ideas...are always subject to change as further data comes in” (Tart, 2009b, p. 49). By his own admission, it is his *curiosity*—a characteristic that he considers “the heart of science, psychology, and spirituality”—that brought him into Transpersonal Psychology (Tart, 2016b, p. 15). Throughout his lifetime, he was never afraid to ask the further question. For this, Transpersonal Psychology is forever in his debt. A lifetime is basically not important in terms of years, but in terms of intensity and value fulfillment (although being 85 years young in these days and times is certainly something to celebrate!). The lifetime of Charles Tart is significant in those terms and in the creative enjoyment of his life he has furthered the vision of Transpersonal Psychology as a *science* of Mind and Spirit and a *psychology* of human possibilities that he pioneered so many years ago. Happy Birthday, Charley, and Thank You!

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Eine transpersonale Festschrift zu Ehren von Charles Tart zu seinem 85. Geburtstag Paul F. Cunningham

Zusammenfassung: Diese Zusammenfassung ehrt Charles Tart zu seinem 85. Geburtstag, indem sie einen Überblick über seine Beiträge und den Einfluss seiner Arbeit auf die Subdisziplin der Transpersonalen Psychologie gibt. Sechs Beiträge werden besprochen, nämlich seine Vision der Transpersonalen Psychologie als: (a) eine Wissenschaft von Geist und Seele, (b) eine kritische Psychologie, (c) eine empirische, nicht-kirchliche Herangehensweise an Religion als spirituelle Psychologien, (d) eine zustandsspezifische Wissenschaft von außergewöhnlichen menschlichen Erfahrungen, (e) eine evidenzbasierte Wissenschaft der Spiritualität, die auf den wissenschaftlichen Grundlagen der experimentellen Parapsychologie beruht, und (f) eine Psychologie der menschlichen Möglichkeiten, die dem Einzelnen helfen kann, Hindernisse für Wachstum zu überwinden.

German translation: Eberhard Bauer

Um Festschrift Transpessoal em Homenagem a Charles Tart em Seu 85º Aniversário Paul F. Cunningham

Resumo: A presente sinopse homenageia Charles Tart em seu 85º aniversário, analisando suas contribuições e a influência de seu trabalho na subdisciplina da Psicologia Transpessoal. Seis contribuições são analisadas, a saber, sua visão da Psicologia Transpessoal como: (a) uma ciência da Mente e do Espírito, (b) uma psicologia crítica, (c) uma abordagem empírica e não eclesial das religiões como psicologias espirituais, (d) uma ciência específica do estado excepcional da experiência humana, (e) uma ciência da espiritualidade baseada em evidências e fundamentada nos alicerces científicos da parapsicologia experimental e (f) uma psicologia das possibilidades humanas, capaz de ajudar os indivíduos a superar obstáculos ao crescimento.

Portuguese translation: Antônio Lima

Un Festschrift Transpersonal en Honor de Charles Tart a Sus 85 años Paul F. Cunningham

Resumen: Este artículo rinde homenaje a Charles Tart a sus 85 años, describiendo sus contribuciones y la influencia de su trabajo en la subdisciplina de la Psicología Transpersonal. Incluyo seis contribuciones dentro de su visión de la Psicología Transpersonal: (a) una ciencia de la Mente y el Espíritu, (b) una psicología crítica, (c) un enfoque empírico y no ritualista de la religión como psicología espiritual, (d) una ciencia específica del estado de la experiencia humana excepcional, (e) una ciencia de la espiritualidad enriquecida por la evidencia y basada en los fundamentos científicos de la parapsicología experimental, y (f) una psicología de los potenciales humanos para ayudar a los individuos a superar obstáculos al crecimiento.

Spanish translation: Etzel Cardeña

Charles Tart's Contributions to Parapsychology:

A Scientific Career Sparked by the Cabbage Patch Kid¹

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Abstract: In this *Festschrift* in honor of Charles Tart, I originally intended to focus on how Charley – as his friends call him – influenced the discipline of parapsychology from his entry into the field in the 1960s to the present day. That turned out to be an overly ambitious goal because Charley has made so many influential contributions, and in so many facets of parapsychology, that it is not possible to cover them all without writing a lengthy monograph. So instead, I offer a few words about how Charley influenced my own involvement in the field, then I mention four topics that continue to shape the way I think about and approach the study of psi phenomena, and I finish my tribute with an edited transcript of a delightful chat I had with him in preparation for writing this article.

Keywords: Charles Tart, anomalous cognition, parapsychology, transtemporal inhibition, psychophysiology, feedback, fear of psi

Highlights

- Charles Tart has been an influential figure in parapsychology for over 60 years.
- In 210 journal articles and over a dozen books, he popularized the term “altered states of consciousness,” co-founded the discipline of transpersonal psychology, advanced the concept of post-materialist sciences, and blazed new trails in experimental methods and theoretical ideas.
- Among his most important contributions were the necessity of selecting participants for talent, the need for immediate feedback in psi training, the discovery of transtemporal inhibition, the value of psychophysiological measures, and his analysis of the fear of psi.

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I am personally grateful to Charley, because if it were not for him there is a good chance that I would not have devoted my professional career to parapsychology. I was in graduate school at the University of Illinois in the 1970s. One day, in a sub-sub-basement of the campus library, I found a large section of books and journals on parapsychology. I spent a fair amount of time reading that literature, and at one point through a friend I obtained some vibhuti ash that was said to be miraculously manifested by the Indian guru, Sai Baba. After conducting a materials analysis of the ash (which turned out to be finely crushed sand), I described my efforts in an article that I submitted to the *Journal of the American Society for Psychical Research*. About six months later, I received a rejection notice from the journal. For reasons I still do not understand, I expressed my disappointment in a letter I wrote to Charley, whom I had not met in person, but whose work I admired from afar. To my surprise and delight, he replied in a letter that changed my life.

I had graduated by then and was working at AT&T Bell Labs, which at the time was one of the premier industrial laboratories in the world. I could see a path ahead whereby it would be easy to spend one's entire working career there. But a part of me was not satisfied with that comfortable potential because making better telephones did not feel sufficiently meaningful. By contrast, after reading Charley's books I felt it would be more exciting to scientifically explore the frontiers of consciousness.

In his letter to me, Charley patiently explained that sometimes the topic of an article falls outside the scope of a journal, so perhaps my analysis of vibhuti ash fell into that category. However, he continued, it was important to keep up my interests in parapsychology because it was one of the most interesting areas of research that a newly minted scientist could pursue. If I had not received those simple words of encouragement, I could have easily dropped psi research from my list of possible futures. I am glad I did not.

Innovations

Regarding Charley's contributions to parapsychology, besides popularizing the term "altered states of consciousness" in the scientific and popular lexicons (Tart, 1972a), co-founding the discipline of transpersonal psychology (Tart, 1975), advancing the idea of post-materialist sciences (Tart, 2009), publishing some 210 journal papers, including influential articles in *Science* (Tart, 1972b) and *Nature* (Tart, 1980), and authoring or coauthoring some 14 books, Charley initiated a host of innovative concepts in parapsychology that influenced how I think about and approach the study of psi phenomena (see <https://blog.paradigm-sys.com/articles-library/> for a full list of Charley's articles). I will briefly mention four such ideas.

First, Charley proposed that it was important to recruit participants for experiments who were pretested and selected for talent, and then to provide them with immediate trial-by-trial performance feedback to avoid "extinction" effects (Tart, 1966, 1976, 1977). I found these arguments to be persuasive, and I have tried to implement them when resources allowed. Fortunately, both of these recommendations are simpler to follow today, as compared to methods typically used five or six decades ago, with the rise of fully automated online experiments.

Second was Charley's discovery of an unconscious strategy apparently used to sharpen psi perception in forced-choice precognition tasks, which he dubbed transtemporal inhibition (Tart, 1978, 2017). That term was a play on "temporal inhibition," which refers to an effect observed in many sensory modalities, whereby presentation of one stimulus can suppress the response to a second stimulus (Cohen, 2011). Charley's neologism highlighted that transtemporal inhibition appeared to act even for perception of future targets.

I believe that the study of such unconscious strategies is important and will continue to play a central role in future process-oriented psi research. Such methods are also significant because they offer a way to test if feedback is *necessary*. That is, if psi can be shown to operate without feedback, and to be influenced by “hidden” features of the target, then it implies that quasi-physical models based on precognition, which some have proposed to account for all forms of psi, may be insufficient (Marwaha & May, 2019; Targ, 2023).

The third innovation was the use of psychophysiological methods to study psi (Tart, 1963, 1968). As physiological instrumentation continues to shrink in size, drop in cost, and enable noninvasive, portable measurements, and as the analytical methods used to study these data continue to advance, I believe this topic too will become increasingly important in revealing how unconscious information processing affects psi performance.

Fourth, Charley wrote extensively about why psi is such a chronically and hotly contested topic (Tart, 1982). I imagine that anyone who becomes deeply involved in parapsychology will eventually encounter people who react in unexpectedly emotional ways when this topic is broached. Like Charley and many others, I witnessed intelligent, presumably rational scientists and scholars act as though they were being physically attacked when I merely mentioned my interest in psi. Such behavior is antithetical to the open-minded aspirations of science and academic freedom, and as such, I was puzzled by these reactions.

I was thus captivated by Charley’s analysis of this surprising phenomenon, and I found that his analysis helped me to better understand it. He identified six typical causes: (1) The critic has a tightly held, possibly unconscious belief that is not based on reason; it is literally a prejudice fueled by and similar to a faith-based religious position. (2) The critic insists that psi is impossible because it violates one or more unspecified laws of science, which they then use as justification for why the evidence is impossible and must

be ignored (e. g., Reber & Alcock, 2019). (3) Psi is damned by association, whereby psi experiences (and those who investigate it) are assumed to be identical to every crackpot anecdote lumped into the catch-all term, *paranormal*. From that perspective, claims about the scientific evidence for psi are regarded as identical to amazing tabloid yarns about the Bermuda Triangle’s hyperdimensional portal and politicians who are actually alien-Sasquatch hybrids. Incidentally, such yarns used to include UFOs, until government officials in the United States (and elsewhere) finally admitted that there really were some genuinely strange unidentified objects flying in our skies (Kean & Blumenthal, 2022). (4) The critic claims that even if psi were real, it is trivial because it has no practical applications, or (5) the exact opposite whereby if real, then psi would be so revolutionary that all of the hard-won scientific advances of the past centuries would have to be thrown away. And (6) some psychics and mediums have been found to be frauds, so *ipso facto* all psi research is also fraudulent. While these nonrational reactions to scientific studies are annoying, analyses of the underlying reasons can be useful in developing less triggering ways of presenting and discussing this line of research.

A Chat with Charley

In May 2023, I interviewed Charley about his career and background (which will help explain the title of this article). In the edited transcript below, I am DR and Charley is CT.

DR: When you think back on the many years working in parapsychology, first from experimental and theoretical perspectives, and then from a transpersonal perspective, what things come to mind as being the most influential?

CT: Before I got involved in parapsychology, I was into electronics. I was a ham radio operator. I taught myself enough electronics to get a commercial radio telephone license, which helped work my way through college, since my main job would be to be in the transmitter room ready to fix it if it broke. But otherwise my time was free.

I gained a perspective on communication through electronics, and particularly AM radio. You were often trying to communicate over long distances where things were very noisy. And so when I read about the [ESP] card guessing tests and the very low level of results usually obtained, to me this was obviously a matter of very poor signal to noise ratio. Instead of arguing over whether there really was any ESP or not, people needed to do things to get that signal to noise ratio much higher.

Then in graduate school I had to take an early morning course on classical approaches to learning, most of which I found boring. But I applied what I knew to the card guessing test, and it struck me that the way they're carried out they are classical extinction paradigms: You make people give responses, but you don't give them any immediate feedback, and sure enough, even the very best soon lose their abilities.

And if I thought of it from what it's like from the inside, you start out with some idea of when you're hot and should make a call, and when you really should wait or relax. But now you get confused with the lack of feedback and start losing your motivation.

And sure enough, scores would decline. So, the obvious moral was if you want to get the signal to noise ratio up, you need to train people by giving them immediate feedback. And there were many ways to improve on that very basic paradigm. Of course, I was aware that what I was also saying to all the old timers in the field was "you've been killing off the very phenomena you want to study," which I'm sure was not a welcome message. There was very little appropriate response to my article on the need for feedback.

There were two or three studies that did exactly what I said wouldn't work, and that is to take people with no pre-selection that they had any talent to begin with, you don't give immediate feedback, and they don't improve. Well, that's perfectly in line with my theory, but it's a trivial finding. Over the years I've noticed that the remote viewing paradigm incorporated not immediate feedback, but fast feedback. You did one target in

a day. You took the person to the target afterwards. So maybe it was 15 minutes or half an hour before you got the feedback of actually seeing the target. But you didn't have other calls in between to create confusion. I think it's one of the reasons that remote viewing has worked so well, and that the remote viewing experimenters almost never talk about decline effects. They're not extinguishing the talents. That was my start.

DR: That work turned into a book on training ESP.

CT: Yes. I was teaching experimental psychology, so I told the students, this is going to be a hard course, because I'm going to expect a lot of work from you, but we're not going to just do exercises where you read the answer in the book. We're going to do a real experiment that can have practical consequences.

I screened a thousand or more students at the end of class periods on an ESP test and picked the ones who showed signs of individual significance. And then, of course, some would be false positives. So we did further individual testing and narrowed it down to maybe 20 people who looked like they definitely had some psi talent. They'd been individually significant in two tests in a row.

Then they trained with immediate feedback on either a ten-choice machine that I had built (see Fig. 1), and sure enough, we saw no decline effects. Some of the people even started to climb in their performance, and then the academic quarter was over and everything had to stop.

I expected lots of colleagues to pick up on this, but, as I said, only two or three did, and they completely ignored the warning that you had to have people with some talent to begin with. It's one of the things that also led me into my thinking later on, and other stuff that I don't think people like to hear. And that is that at some level maybe most of us might be afraid of ESP.

Figure 1

Etzel Cardeña Modelling the 10 Choice Procedure, Circa 1988



I mean, what was this weird thing that we had no idea how to control or focus on? And did I really want people to telepathically know all about me without my being able to censor what they should learn? So I wrote about fear of psi in experimenters, and again I don't recall anybody else but me said I've been afraid of psi at times. But I can't believe I'm the only one.

So a major theme that went through a lot of the rest of my research was that we have to study the experimenter too. That is, experiments are not just a testing procedure, they're also a social procedure. Probably there's psi between experimenter and percipients, but we're pretending that this is like a physics experiment where you can ignore the influence of the experimenter. Well, that ain't gonna work. But, again, my calls for more study of the experimenter have been almost totally ignored.

Let me give you an example of something that almost actually happened. It illustrates how useful it would be to have a better signal to noise ratio, and that is in the practical application of remote viewing. The StarGate program of psychic espionage went from a few experiments whose main purpose was to demonstrate that psi manifests in the remote viewing procedure, to trying to put it to practical use. Like where is that drug boat that we think is in the Gulf of Mexico right now? Where is this high value hostage

being held? What's happening out in the desert in China? What are they testing out there that requires so much equipment? And it got up to the point where they were repeatedly asked by various intelligence agencies to do practical tasks. I was very impressed. But then, of course, politics came in and the publicity let the naysayers denounce everything. And that effort pretty much stopped.

But I thought that's the way our field should have gone to begin with. Rather than being stuck over and over on trying to prove it to people who are totally biased against it, move right into the application stage. Of course, you needed a better signal to noise ratio than you've got in the classical paradigm.

At first I thought, like a lot of our colleagues have thought, that if you just produced better evidence, of course the skeptics will be convinced. And then I realized they're pseudo-skeptics. They're not interested in a better understanding of the truth. They already know the truth and they've got to get rid of this competition.

It wasn't just the practical applications that interested me. I was also very interested in what it meant, in terms of a spiritual view of the universe. I was raised as a Lutheran. My parents weren't particularly religious, but my grandmother was, and she lived in the apartment below ours. She took me to Sunday school, and then on to church, and so forth. And grandparents, hey! Those are the unconditional love people. What was good enough for them when you were a kid was good enough for you, so I believed everything they told me in church. I didn't understand most of it, but I believed it. And then gradually, as I got older I got skeptical and I saw that there was a view that claimed science had disproved anything connected with religion or spirituality. It is all nonsense, I thought.

I will give you an example that really affected me as a student at MIT. I was browsing in the bookstore one day for something to read, and I went to a book table they were

clearing out. There was a book there with a title that wasn't interesting at all in terms of my technical pursuits. It was called *The Search for Bridey Murphy* (Bernstein, 1956).

But then I noticed it said something about hypnosis on the cover. Well, I knew a lot about hypnosis that you can get from reading, and it was one dollar for a book, so I bought it, read it, and thought, this guy Bernstein seems pretty good. He's not making any ridiculous claims, but he's got a fairly interesting case for reincarnation here. At the very least, it could show the need for more research. And then about six months after I bought it, another book came out, an anthology called the *Scientific Report on The Search for Bridey Murphy* (Kline, 1956).

And I thought, oh, boy. Here's more sophisticated discussions from people who know a lot about hypnosis. And sure enough, I recognized the names of most of the contributors as leading authorities on the nature of hypnosis. I read that book with great interest. But I came away very puzzled, because they constantly said that this guy Bernstein, the one who wrote the book on Bridey Murphy, claimed such and such, which was clearly ridiculous.

I kept thinking I don't remember him claiming that, so I went back and reread *The Search for Bridey Murphy* and I found out that these leading scientific authorities were basically making up stuff. They were criticizing this guy for things he didn't say. And that told me, boy, there is a crazy sort of thing going on here. If people either deliberately lie or have their perception so distorted that that they do something like that, well, being an idealistic teenager that really angered me because I believed that science is based on total honesty. So anyway, I met Morey Bernstein that summer, and he was a nice guy. He was only claiming that there ought to be more research.

So this was one of the beginnings of my really seeing that parapsychological findings were relevant to the question of is there anything to spirituality other than programming your bio-computer, as it were. Or to think or believe certain things that may not have any basis in reality. Of course, I've now mentioned this theme many times in my writings, that anyone who says science has shown that all spirituality is nonsense doesn't know what they're talking about.

People can reach out to others at a distance. Does that make the idea of other kind of entities totally ridiculous? Not for me. It says this is really interesting. Most parapsychological colleagues don't want to have anything to do with this because they're already criticized for having people guess ESP cards. So they don't dare bring in the possibility of spiritual entities.

DR: We talked a little about the requirement for immediate feedback, for selecting people who have talent and about some of your observations about why remote viewing worked. Then what was the next thing that attracted your attention from an experimental perspective?

CT: I've been very interested in altered states as a possible vehicle for psi, but hardly did any actual research. It's been more theoretical.

DR: Were you involved at all in the development of the ganzfeld technique as a way of producing an altered state for telepathy tests?

CT: Indirectly, Chuck [Honorton] was very interested in what I wrote about altered states. I think he was totally charmed by my altered states of consciousness book (Tart, 1972), and we talked about it as he was developing the ganzfeld protocol.



Another important thing that I still haven't gotten through to people is that if they want to work with altered states, say the effects of hypnosis on ESP performance, or the effects of the ganzfeld on telepathy, did they test to see if the desired altered state was actually produced? We may have a lot of people trying a method that doesn't really work. It seems elementary to me that if you're asking how running faster affects performance on some task, then you have to test people who are running, and not just talk about it.

DR: Let us talk about your studies of out of body experiences (OBE), because very few experiments have ever been done on that topic. The ones you did are the studies that people usually point to as among the first that tried to experimentally test if there was a real OBE state.

CT: You know. I was just very lucky. I'd always been interested in out of body reports and their really important implications for spirituality. There is the concept of a spiritual body, and maybe that's what out of the body experiences involved. Of course, that's a big jump, but I'm speculating here. But given the question of whether we're just a meat machine, or whether we have a spiritual self, I think it is an awfully important question.

We should really be researching that stuff now. I was able to research it out of pure luck. Years ago, our babysitter happened to notice that in our house it was okay to talk about unusual experiences. We didn't dismiss people's unusual experiences. She reported that she had had out of the body experiences. She asked me what they were. I told her, to simplify it, that there's two theories. One is it's just a dream. You imagine that you're out of your body. The other theory is that in some real sense your sensing abilities are located at a different locale, not where your physical body is.

So she asked me, well, how would she know which theory is correct? That's when I suggested a basic test. I asked her to number some sheets of paper, one to 10. Then scramble them up so she couldn't see the papers after she was in bed. Then put one on

the bedside table so it was visible from the ceiling, but not from the bed. If she happened to float up near the ceiling, then memorize the number, check it out in the morning, and get back to me later.

When she called me a few weeks later and said she tried this test so far 10 times, and she was always right, I became interested. And although she was moving away from that part of the country, I was able to get her into my sleep laboratory several times, and I found that she had a unique EEG pattern when she was having her out the body experience, and in one case did correctly identify a 5 digit target number written in a piece of paper that was on a shelf up near the ceiling.

And then I worked with Bob Monroe later, who became a good friend, and he was a very fine man. He was trying to understand what was happening to him when he had an OBE. Of course, he had years of experiences and ended up writing several books and founding an organization to try to teach people to have out of the body experiences.

DR: One of your other experiments that influenced the way I think about forced-choice tests is the probabilistic predictor experiments. How did those come about?

CT: One of the criticisms that's been made of the early and even ongoing ESP studies has been that we don't understand the statistics, or that the target sequence wasn't really random. So if you think they're guessing at random targets, and if the sequence isn't random, then your experiment is shot. Well, I bought into that for years. Everybody seemed to think that way.

And then I thought, Wait a minute. You can't think all or none here. It's a matter of how much a target sequence differs from purely random. You could have tiny biases that might be too small to be useful. So I devised a program that basically, after every trial, took the feedback of the previous target and recalculated the probabilities of single digit targets (i. e. 1, 2, 3 ...), and then the probabilities of doublets (1-2, 1-3, ... 9-1, 9-2, ...). Would

that information provide enough of a bias to want to change what you're going to guess the next time?

I applied this idea to the data from my big ESP feedback training study, where I had several subjects who did extremely well. I used the [University of California] Berkeley main computer to do these calculations, with capabilities way beyond what you can expect for a human. I mean, can you remember the last 499 targets in some target sequence?

What I found was that the human beings did way better than the computer could do. I was glad to find that there was still psi appearing in this data. So I suspect a lot of old experiments were thrown out without even really being analyzed because -- oh, heavens! -- the sequence was not completely random. If this test were applied to other tests, it would be really interesting to see how human beings did as compared to the computer analyses.

DR. : One of the other things that I always thought was interesting was the effects of electrical shielding on ESP performance.

CT: When I was a student at MIT, I helped found a Psychic Research Club, and we had various speakers in. We heard about Andrija Puharich using electrical techniques to increase psi ability (Puharich, 1962). Whoa! That was the kind of thing we wanted to hear about. So I spent a summer working for Puharich because I wanted to see the apparatus up close and see what he was like, because it was a big claim he was making, and some people were just dismissing him as a fraud or charlatan because he was getting such strong ESP results. But I went away thinking that he did some solid experiments on his various ideas. After he got into contacting people from other planets, that's when Puharich left me behind.

But his basic electrical finding was that if you take a Faraday cage, something that shields all outside electromagnetic radiation so it doesn't penetrate inside, and if you connect the cage to an Earth ground, then the ESP results go up strongly. If you then disconnect from ground and let the cage electrically float, that is let it pick up electrical effects from ions in the air and so charges would go up and down, then you knock down ESP scoring to chance. I thought, wow, you've got an amplifier and an off switch. That's very, very interesting.

So, when I got a grant for dream research, later I made sure that I had the money in there to build a Faraday cage because it was actually useful for getting clean EEG signals for the dream work. Then at some later date I would be able to either ground or not ground the cage.

Then in one of my experimental psychology classes, years later, I again told the students, you're going to work extra hard in this class because we're going to do a real experiment as part of learning how to do experiments. So, join with me in this adventure as more of an apprentice sort of thing, rather than just me dispensing wisdom from the pulpit.

We had to use ordinary college students, but still I found that letting the Faraday cage electrically float tended to produce chance results, while the grounded condition produced results somewhat above chance. It's been a while since I looked at the numbers, but I think it was a significant difference.

So basically, one of the most important experiments and findings in the whole parapsychological field has been totally ignored. It may have found the way to help bring ESP under control, a way to turn it off.

DR: On another topic, I think anybody who goes back and looks at the parapsychological articles published in *Science* or *Nature*, that they cannot possibly come away from that, assuming they are able to maintain a neutral perspective, with anything other than admiration. And also, surely they would imagine how exciting it must be to study such effects.

CT: Well, that's certainly how I looked at it. And I would have to say, as I approach the end of my life, there's been a lot of struggles because of those pseudo-skeptics attacks, but by and large it's been really exciting and challenging and fun.

I will give you an interesting anecdote that you might want to put in your article. I'm hoping that I can do one more book before I find out for myself whether there's any survival or not. And it'll be something that's technical in some ways, but very personal and anecdotal. And I was going to start with an anecdote of how I was curious from a very early age. I was 4 or 5 years old, and one day I got curious and I asked my mother, where did I come from?

My mother said: Oh, we were driving out in the country, and we looked in this cabbage patch, and there was this cute little baby in the cabbage patch, and he was so cute we brought him home. That's you.

So I said, well, okay. My mother was very smart. She was the big authority in my life, so I guess that must be true. But it didn't compute. There was something really funny going on here, so I needed to look more closely at what the authorities said. So maybe that laid the foundations for my interests in science, curiosity, and an ability to question the authorities.

DR: Perhaps another interpretation is that your mother was precognitive, because years later, in 1982, the soft sculptured dolls called the "Cabbage Patch Kids" became the

top selling toy in the United States for three years in a row. And they are still selling them today, some 40 years later. So, the event that sparked your enduring curiosity, which in turn has led to so many original contributions to parapsychology, now offers me the title of my homage to Charles Tart!

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**Charles Tarts Beiträge zur Parapsychologie:
Eine wissenschaftliche Karriere, ausgelöst durch das Cabbage Patch Kid**
Dean Radin

Zusammenfassung: In dieser *Festschrift* zu Ehren von Charles Tart wollte ich mich ursprünglich darauf konzentrieren, wie Charley – wie ihn seine Freunde nennen – die Disziplin der Parapsychologie seit seinem Eintritt in das Feld in den 1960er Jahren bis heute beeinflusst hat. Das erwies sich als ein allzu ehrgeiziges Ziel, denn Charley hat so viele einflussreiche Beiträge geleistet, und das auf so vielen Bereichen der Parapsychologie, dass es nicht möglich ist, sie alle zu behandeln, ohne eine lange Monographie zu schreiben. Stattdessen möchte ich ein paar Worte darüber verlieren, wie Charley meinen eigenen Zugang zu diesem Gebiet beeinflusst hat, dann erwähne ich vier Themen, die mein Verständnis und meine Herangehensweise bei der Erforschung von Psi-Phänomenen nach wie vor prägen, und ich beende meine Würdigung mit einer redigierten Niederschrift eines vergnüglichen Gesprächs, das ich in Vorbereitung auf diesen Artikel mit ihm führen durfte.

Contribuições de Charles Tart para a Parapsicologia: Uma Carreira Científica Desencadeada pelo Cabbage Patch Kid
Dean Radin

Resumo: Nesta *Festschrift* em homenagem a Charles Tart eu pretendia, originalmente, me concentrar em como Charley – como seus amigos o chamam – influenciou a disciplina da parapsicologia desde sua entrada no campo na década de 1960, até os dias atuais. Essa acabou sendo uma meta excessivamente ambiciosa, porque Charley fez tantas contribuições influentes e em tantas facetas da parapsicologia que não é possível cobrir todas elas sem escrever uma longa monografia. Então, em lugar disso, ofereço algumas palavras sobre como Charley influenciou meu próprio envolvimento no campo, depois menciono quatro tópicos que continuam a moldar a maneira como penso e abordo o estudo dos fenômenos psi, e concluo meu tributo com uma transcrição editada de uma encantadora conversa que tive com ele em preparação para escrever este artigo.

Portuguese translation: Antônio Lima

**Contribuciones de Charles Tart a la Parapsicología:
Una Carrera Científica Inspirada por el Cabbage Patch Kid**
Dean Radin

Resumen: En este *Festschrift* en honor a Charles Tart, mi intención original era centrarme en cómo Charley –como lo llaman sus amigos– influyó en la disciplina de la parapsicología desde su entrada en el campo en la década de 1960 hasta la actualidad. Resultó ser un objetivo demasiado ambicioso porque Charley ha tenido tantas contribuciones influyentes, y en tantas facetas de la parapsicología, que no es posible abarcarlas todas sin escribir una larga monografía. Así que, en su lugar, ofrezco unas palabras sobre cómo Charley influyó en mi propia implicación en el campo, y menciono cuatro temas que siguen informando mi manera de pensar y abordar el estudio de los fenómenos psi. Terminó mi homenaje con la transcripción editada de una deliciosa charla que tuve con él en preparación para escribir este artículo.

Spanish translation: Etzel Cardeña

Body Movements During Maladaptive Daydreaming: A Thematic Analysis of Asynchronous Email Interviews¹

Eli Somer

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Abstract: *Objectives:* This study aimed to shed light on the lived experience of stereotypical body movement and gesturing during maladaptive daydreaming (MD). *Method:* Forty-one individuals with probable MD participated in asynchronous in-depth email interviews. *Results:* Four themes describing the movement experience in MD emerged: Need, Variety, Awareness and Agency, and Functions. *Conclusion:* The analyses revealed two main findings about the bi-directional effect of movement on MD. First, kinesthesia may enhance the daydreamers' experience by deepening their fantasy immersion through improved focus featuring self-hypnotic characteristics. In addition, respondents reported that their body movements enhanced the daydreaming experience by embodying the protagonists' actions. MD-related motions were associated with occasional loss of agency, suggesting unintentional neuromuscular activation.

Keywords: maladaptive daydreaming, kinesthesia, stereotypical movement

Highlights

- Body movement is a central feature in the experience of maladaptive daydreaming (MD)
- During MD, individuals walk, pace, move hands and fingers, rock, mouth, laugh, and cry.
- Some MD-related movements are voluntary and some are experienced without a sense of agency.
- MD-related movement enhances focusing and creates a self-hypnotic immersion.
- MD-related movement intensifies the experience by embodying the protagonists' actions.

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Maladaptive Daydreaming (MD) is a proposed dissociative disorder (Soffer-Dudek & Somer, 2022) characterized by addictive immersions in complex fantastical daydreamed plots, generating intense emotional involvement, often accompanied by stereotypical movements such as pacing, rocking, hand movements, and mouthing (Bigelsen & Schupak, 2011; Somer, 2002; Somer et al., 2017). The construct of immersive and maladaptive daydreaming is related to Wilson and Barber's (1982) concept of fantasy-proneness, a trait found among highly hypnotizable individuals who report lifelong vivid, imaginative involvement, and mystical and religious experiences, together with claims of having particular psychic abilities and out of body experiences (Wilson & Barber, 1981). The common feature of the two constructs is an elevated involvement in fantasy. This gratifying inner absorption becomes maladaptive, consuming many waking hours, when it compromises the accomplishment of daily tasks, hinders the achievement of short- and long-term goals, or generates shame or guilt. In short, immersive daydreaming becomes maladaptive when it interferes with functioning in social, academic, or occupational realms or causes clinically significant distress (Pietkiewicz et al., 2013; Schupak & Rosenthal, 2009; Schimmenti et al., 2019; Soffer-Dudek et al., 2020; Somer, 2002). Soffer-Dudek and Theodore-Katz (2022) found in an Israeli sample that, similar to other internalizing psychiatric syndromes, MD has a point prevalence of 2.5%. Individuals with MD reported spending, on average, 57% of their waking hours on fantasy activity, compared with 16% of the hours for individuals with no MD (Bigelsen et al., 2016).

Like other behavioral addictions, MD features a powerful urge to engage in the behavior, annoyance whenever it is not possible, and repeated unsuccessful efforts to control, cut back, or stop it (Pietkiewicz et al., 2013; Soffer-Dudek et al., 2020). Although it may be employed initially as a way of coping with distress (Somer, 2002), MD has been often associated with elevated psychopathology (Somer et al., 2017) and next-day negative emotions (Soffer-Dudek & Somer, 2018; Wen et al., 2021). Regrettably, many

mental health practitioners misdiagnose MD or minimize the problem, resulting in suboptimal treatment and heightened loneliness and distress (Bigelsen & Schupak, 2011).

MD and dissociative phenomena share common phenomenological characteristics, including double consciousness, vivid sensory imagery, and the activity of internally narrated characters. The protagonists in MD are occasionally experienced as having independent agency, but unlike the identities in dissociative identity disorder (DID) these imaginary personae typically do not take control of the individual's behavior. Soffer-Dudek and Somer (2022) concluded that high dissociative absorption is a common risk factor shared by several dissociative disorders, such as depersonalization/derealization disorder, DID, and MD. Similar to individuals with dissociative disorders, many persons with MD report that their earliest experiences of MD began during childhood, independently of childhood trauma (Somer et al., 2016a), implying an innate predisposition to absorptive immersion in fantasy (Schimmenti et al., 2019). The trait that enables a convincing sense of presence in fantasy also can facilitate mental escape from childhood adversities (Ross et al., 2020) and their memories (Abu-Rayya et al., 2020), or a painful current reality (Somer et al., 2019). MD is highly comorbid with attention deficit hyperactivity disorder, obsessive-compulsive and related disorders, anxiety disorders, and depression (Somer et al., 2017), and is associated with high rates of suicidality (Soffer-Dudek & Somer, 2018). The suffering associated with this form of mental activity has led to multiple online forums dedicated to MD. One of them, on Reddit, serves over 102,000 participants (Retrieved from <https://www.reddit.com/r/MaladaptiveDreaming/> on August 17, 2023).

One of the sources of misdiagnosis of MD is the concomitant feature of kinesthesia (Somer et al., 2016). For example, many children who display repetitive movements are diagnosed with a stereotypical movement disorder or autism spectrum disorder. These children often report engaging in enjoyable daydreaming as they engage in physical

movements (Freeman et al., 2010; West et al., 2021). Adults with MD tend to seek privacy when daydreaming to avoid scrutiny and ridicule (Somer et al., 2016a) in response to their facial and body movements. Indeed, physical activity during MD is consistently reported in the literature (Somer et al., 2016b). In fact, two items describing body gestures and movement were included in the 16-item Maladaptive Daydreaming Scale (MDS-16, Somer et al., 2017). Items 3 and 14 of the MDS-16 ask, respectively: "How often are your current daydreams accompanied by vocal noises or facial expressions (e. g., laughing, talking, or mouthing the words)?" and "How often are your current daydreams accompanied by physical activity such as pacing, swinging, or shaking your hands?." Still, the role and meaning of body movement in the experience of people who engage in immersive and maladaptive fantasies are not yet understood. This qualitative inquiry aims to shed light on the lived experience of stereotypical body movement and gesturing during MD.

Method

Participants

A call for English-speaking participants aged 18 or older was sent out to 200 individuals who self-identified as coping with MD and had previously written to the author indicating their interest in MD research. Fifty-two respondents expressed interest in the research topic and received informed consent forms with a detailed study description. We emailed these individuals the 16-item Maladaptive Daydreaming Scale. Forty-one respondents with a mean MDS-16 score ≥ 40 , the cutoff mean score indicative of probable MD (Soffer-Dudek, 2021), were invited to partake in an asynchronous email interview study.

According to Patton (2002), to maximize the use of limited resources, qualitative research should use purposeful sampling to select cases with the most information on a topic of interest. To this end, the author interviewed 41 consenting individuals at least 18

years old who met the MDS-16 criterion for probable MD and agreed to share their thoughts about physical movement during MD. This purposeful homogeneous sample promised to offer a deeper insight into the topic of interest. Participants in this study came from five continents: Asia (13), North America (11), Europe (8), South America (6), and Africa (3). Eleven participants were male, the others female. Their mean age was 31.3 ($SD = 10.3$), ranging from 18 to 62. Thirty-one respondents indicated their marital status as single; three were divorced, one was a widow, and six were married or in a relationship. Nine participants had a high school degree, some college education, or a diploma; 17 had completed a Bachelor's degree or were graduate students; 10 had a Master's degree, and 5 respondents had completed their doctoral-level education. Twenty-two individuals were employed, and one was retired. The rest were unemployed. The mean MDS-16 score of the sample was 61.4 ($SD = 12.4$), range: 40 - 99. In sum, this is a culturally diverse sample. The typical respondent was a well-educated, unmarried female in her thirties with an MD score well above the clinical cutoff score of 40. This sample was characterized by a 46% unemployment rate, perhaps reflecting the impairment of functioning associated with MD.

Measure

The *Maladaptive Daydreaming Scale-16* (MDS-16; Somer et al., 2017). is a self-report measure commonly used in MD research. It has 11 points on a scale ranging from 0% (never, no distress) to 100% (extreme distress, extremely frequent). The scale includes four factors: a yearning to engage in daydreaming, impaired functioning, an urge for physical movements (kinesthesia), and listening to music (Soffer-Dudek et al., 2020). It has been validated as a reliable measure in several languages (e. g., Jopp et al., 2018; Pietkiewicz et al., 2023; Sándor et al., 2020).

Interview Process

Email interviewing is a relatively new research method that offers excellent potential for qualitative researchers (Hawkins, 2018). The two main email interview categories are asynchronous and synchronous (Gibson, 2017). In asynchronous interviews, respondents can receive questions by email or video, which they can reply to at their convenience. In synchronous interviews, the interviewer and interviewee are online simultaneously and questions are posed sequentially in real-time (Gibson, 2017). Asynchronous email interviews can take place over various time intervals (hours, days, weeks, or months) and offer more flexibility than synchronous email approaches (Golding, 2014). It is for this and other reasons that we employed this research method. The merit of asynchronous email interviews for health research has been discussed in the literature (e. g., Amri et al., 2021), including optimization of anonymity, relief from time pressure, and the opportunity to think carefully the wording of each response.

Participation in this study was voluntary as no compensation was offered to respondents. The author emailed the interview questions to consenting participants and requested that they try to respond within 48 hours. If no response was received within 72 hours, I sent a reminder. The research interview followed a pre-prepared interview guide but occasionally diverged from it to explore spontaneously shared information or seek clarification. The interview guide included the following general issues that were presented as more specific inquiries, followed up by further requests for clarification or elaboration:

- Tell me what your body does when you daydream.
- Describe the experience of what your body does.
- How does your movement affect your daydreaming?
- How does your daydreaming affect your movement?
- What is the meaning of your body movement?
- How would it affect your experience if you were motionless during daydreaming?
- Tell me about your sense of control over your body and mind when daydreaming.
- What were people's reactions to your physical movement during daydreaming?

Cooperation was excellent, and particular questions were rarely left unanswered. Each of the 41 respondents received an average of five emails, each containing about five questions, totaling about 1,025 questions asked and answered, showing excellent cooperation. Only two of the requests for information were disregarded by two individuals, with a negligible missing data ratio of less than .002% and no obvious pattern of missingness.

Numbers substituted respondents' names. Answers were copied from the email messages without the corresponding names and email addresses. The responses were then marked with the respective identifying number and compiled by question. All identifying details were removed from the answers to preserve anonymity. The University of Haifa Faculty of Social Welfare and Health Studies Ethics Committee approved the study (Certificate 407/22).

Data Analysis

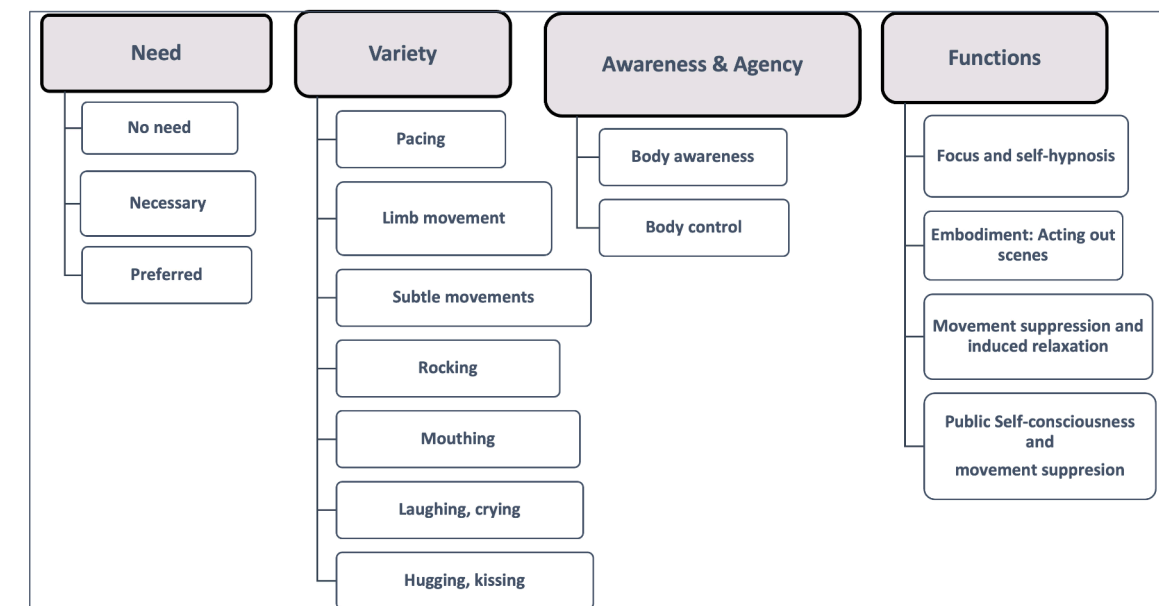
The data were submitted to an inductive thematic analysis (Braun & Clarke, 2006) that included the compilation of email interview responses and followed coding stages. Initially, the author read and re-read the email responses to identify potential themes. The second analysis level involved reviewing these initial codes with a research assistant. We focused on retaining the initial codes' range while producing sub-themes. The analysis of the data was informed by the research question: What is the lived experience and function of movement during MD? In the third analysis stage, the author identified quotes congruent with the identified themes and then defined the themes and sub-themes after reviewing them.

Results

The analysis produced four themes describing the movement experience in MD: Need, Variety, Awareness and Agency and, Functions. These four themes were further divided into sub-themes, as shown in Figure 1. The quoted respondents are identified with numerical codes.

Figure 1

Themes and Subthemes of the Experience of Movement in Maladaptive Daydreaming



Need for Movement in MD

Physical movements served essential functions in the daydreaming experience of most. Although many respondents utilized movement to enhance their daydreaming, smaller groups either could not generate any fantasies without movement or required no physical activity to trigger or maintain their daydreaming.

No Need

About 10% of the sample indicated not needing movement to activate and sustain the daydreaming (because the themes are based on open verbal reports, the

numerical summaries may not be exhaustive as they are based on provided responses. The reported frequencies may also add up to more than 100% because some respondents reported more than one theme in a category). For example: "I don't believe movement significantly influences my daydreaming. I can start daydreaming while walking, but the two are not inter-connected. I daydream without movement all the time" (30); "MD can intrude in my life even when I am still. It begins the moment that I wake up in the morning. While in bed, I can daydream for hours with little movement" (38). Respondent 16 indicated an advantage to motionless daydreaming: "I don't have any associated movement. Not at all. Fortunately. That allows me to daydream in public." But this subgroup was the exception. For most respondents, kinesthesia was essential in their daydreaming experience, and their stories comprise the rest of this research article.

Movement Is Necessary

About 8% of the respondents indicated that they could not daydream unless they moved. For example, respondent 12 categorically determined that moving and vocalizing during MD is a requisite: "Daydreaming while not moving or making sounds? I've tried. That's impossible. It didn't work." For her, daydreaming is simply impossible without the involvement of her body. A similar reaction: "I have noticed that I cannot daydream freely and comfortably when not moving... I do not understand why, but I just cannot. If I sit idly, I may daydream for a few minutes, but then I would have to get up and start walking" (40).

Movement Is Preferred

Eighty-two percent of respondents talked about their preference for movement because of its beneficial effect on the daydreaming experience. Here is one explanation: "It seems that sitting down while daydreaming is impossible. The more movements I make, the more I get immersed in that inner world...When I am still, the immersion is

limited, and so is the pleasure (15)." This respondent connects the intensity and pleasure of the fantasy and her movements. Here is another example: "I don't need movement to daydream, but my daydreams are only vivid if I spin in circles. If I'm still...I can daydream, but it's not realistic at all." (41).

The results suggest that MD-related motions serve at least two roles: intensifying focused attention on the unfolding fantasy and vitalizing the daydreaming experience by the embodiment of the imagined scenes. The role of MD motion was also inferred from cases of subdued movement when expansive gesturing is disadvantageous. Such motion accompanied calmer storylines and induced relaxation. This outcome may be instrumental in public because fewer attention resources are dedicated to the less compelling daydreams allowing for better monitoring of body behavior and onlooker reactions. Many respondents provided similar accounts of public self-consciousness resulting in MD immobility. Noticeably, complete stillness was difficult for most. Here are a few examples: "While traveling on a train, I can't act out my daydreams, so with the help of subtle changes in facial expression but no body movement, I can still daydream, although not as freely as I would like to." (17); "If I have to be still, like when sitting on an airplane, I'll move only my eyes or lips. It is possible, but it requires a particular sedentary 'scene set.' Not very fun." (12); "My brain has a subconscious 'sixth sense' that evaluates if others can see me...if I am with people, but I face the wall, I might move my facial muscles while daydreaming, but not the rest of my body." (29).

In short, although some participants can daydream motionless, most choose movement because of its intensifying effect on MD. When presenting the theme describing MD's functions, I will elaborate on this issue. Respondents reported a wide range of MD-related movements. The following theme describes the plethora of motions and gestures displayed during MD.

Variety of Movement in MD

Stereotypical movements are manifested in several psychiatric disorders, such as tic (Udea & Black, 2021), stereotypical movement (Freeman et al., 2010), and autism spectrum (Singer, 2011) disorders. Maladaptive daydreaming also features kinesthesia as a typical behavioral feature (Somer et al., 2016). Our respondents described several categories of body motion employed. The most prominent of them were pacing and walking.

Pacing and Walking

This type of kinesthetics is often reported on the Internet by MD sufferers (Somer et al., 2016b) and was described by 23 (51%) respondents in this study. For example, participant 4 recounted, "I always like to move, and while daydreaming, I like to walk. I walk continuously for hours and hours while daydreaming without any pain, irritation, or discomfort to my body." Participant 14 wrote: "Regarding repetitive movement, I pace around (most persistent movement) and mess with my hair (touching it constantly). I also carry my phone in my hand with me all the time as I pace around while changing the music volume constantly." Several respondents stated that pacing had characterized their daydreaming since its onset in childhood.

When I started maladaptive daydreaming (around 12), I would pace in a circle in my room and talk to myself out loud. I daydreamed about having conversations with my friends as in real life, I was too shy and quiet and was quite a lonely girl. As a grown-up, I still prefer to pace in my room and fantasize about social life (35).

As is evident in theme 3, movement can facilitate the onset of an MD episode and boost its vividness. However, since movement can also draw unwanted attention to the daydreamer, walking could be the most inconspicuous form of movement safely

employed. This issue will be discussed later in the sub-theme titled "Movement suppression during public self-consciousness."

Limb Movement

Eleven (27%) respondents reported a variety of limb movements: "The movements involve pacing, skipping, jumping, running, dancing, arms swaying, clenching fists, going around in circles, reaching for things, and pushing down on something (21); "When I daydream, I am swaying, jumping, jogging in place, pacing, or dancing. It helps me feel the movement in my daydream (20). Many such reports imply that movement is the physical engine that energizes the imagination. Conversely, five respondents indicated that the causal direction is the opposite. Here is what participant 36 said:

The only thing I do is shake my leg since it soothes me. I cannot be completely still while daydreaming because my leg usually begins to shake. It feels like I have much energy inside my body, so the only way out is to shake my leg.

The interlocutor begins by describing the leg shake as instrumental in inducing calmness. But immediately afterward, he describes the leg movement as an outcome, not a cause. He explains that the leg shake is an involuntary result of the built-up tension associated with the daydream. A similar directionality is implied by respondent 38:

I find myself making real-life hand gestures when daydreaming. These gestures may include pointing at objects where they may be in my daydreams. I feel tempted to begin pacing during an MD episode. Resisting them requires effort and feels unnatural.

She does not gesture. She "finds herself" making gestures and struggles to resist her body movements. These quotes do not offer unequivocal clarity about the role of

movement, a question I shall explore further in themes 3 (Awareness and Agency) and 4 (MD functions). The interviews with members of this sample revealed a diversity of other physical and emotional gestures:

Rocking

“I love daydreaming in the rocking chair!! The rocking chair is fundamental in my culture. Babies and kids are raised in them, so I guess it brings an extra comforting context.” (12); “I sit on my bed and rock back and forth as I daydream. The rocking sets me in the zone, it’s as if it takes away to the other reality.” (2). Quotes like these were shared by three individuals and suggest that stereotypical movement might be instrumental in creating a relaxed alteration of the mental state.

Subtle Movements

Three respondents reported more imperceptible motion “Where I’m not alone, I think there are little movements I might act out, like twisting around in my office swivel/spinning chair, tapping my foot, and twirling my hair.” (9); “While I’m at work or just around other people in general, I have to stay still even if my mind goes to a daydream. In such a case, I find myself still rocking my foot or swaying back and forth slightly.” (20). Other data suggests that the movement is not only a facilitator of the daydreaming state but can also reflect the behavior and emotions of the protagonist in the daydream. Below are subthemes that represent these properties.

Mouthing

Three participants reported mouthing words: “I almost never move my body. Usually, I sit or lay down. I sometimes mouth my dialogues or speak them loudly when I’m home alone.” (28); “I move my mouth, but I don’t open it. I think to the outside world,

I look like I have tics or I’m slightly crazy.” (10); “I mouth along (without actually vocalizing anything) to what I’m saying in my daydream.” (3).

Laughing/Crying

Here are quotes from 2 participants who tend to physically express their daydreamed emotions: “I often daydream funny scenarios and would be so immersed that I would silently laugh until my throat or stomach hurts. I would also mutter to myself and make expressions.” (9); “I am crying as a tragic scene plays out.” (10).

Hugging/Kissing

Acting out romantic gestures was mentioned by two participants: “When I daydream, I move all the time, I act, I talk, and I even pretend I am hugging someone...(18); “I am less restricted when I am alone and find myself engaging in hugging motions and other actual movements to complement my daydreaming (such as lip movements of kissing).” (8). In their accounts of the bidirectional relation between MD and kinesthesia, respondents have also identified changes in their body awareness and sense of agency.

Awareness and the Sense of Agency in MD

Body Awareness

“The movements are independent of me. My theory is that because I frequently don’t realize I’m daydreaming, my body responds as if it was real. Therefore, if my character talks in my daydream, well, I’m actually going to talk...When I have intrusive daydreams, I move more.” (11). This person describes a complete dissociation from her body that seems activated by a separate source of volition: the protagonist in her daydream. Participant 12 described changes in body awareness during MD:

I move my body...but I'm not sure exactly what movements I do. I tried to realize what I do while daydreaming, but as long as I'm paying attention to my body, it's impossible to daydream. After some attempts, I gave up. I concluded that to daydream vividly, I need to forget my body. And this is when I suffer accidents when I'm no longer aware of what my body is doing in my bedroom.

She has a general awareness of her body during MD. However, focusing inwardly on her fantasy is incompatible with monitoring her body, and body awareness precludes MD. Because she prefers MD, she must ignore her body. This automatization seems unsafe and also implies a reduced sense of agency.

Participant 14 reported a similarly delayed awareness: "The urge to pace around pulls me out of bed. Sometimes when I have already got up to start pacing, I am not even aware that I got up in the first place. It is like going into another dimension for a few moments. Rarely, when I become aware, can I snap out of it." It is not *she* that gets out of bed. Without much awareness, "The urge to pace" pulls her out of bed, leaving her incapable of controlling the situation.

Sense of Agency

Body unawareness during MD was reported by participant 6: "I don't think I am always aware I am doing it. After filling in the first questionnaire today, I became more aware of the movements and how frequently I engage in them." The compromised body awareness during MD is sometimes associated with a reduced sense of agency, as well. As participant 29 says: "Pacing, facial expressions, swinging torso back and forth are induced when I daydream. This isn't a conscious decision; often I only notice that I'm moving when I break out of the daydream." The interlocutor describes an "induced" movement and delayed awareness of her kinesthesia. Not only does she not feel she

initiated the movement, but she also becomes aware of it only after emerging from her daydreaming state.

The Function of Movement in MD

Respondents spontaneously described two main functions associated with their kinesthesia: Enhancing the focus and attention on the unfolding MD storyline and reifying MD scenes by acting them out. A third theme emerged from probing questions about the effect of suppressed movement on MD.

Enhanced Focus and Self-Hypnosis

Eight respondents (20%) very explicitly described the role of their movements in focusing their attention inwardly. For example, "Movement helps me focus on my daydreaming and feel more [*sic*] they are more realistic." (26). Respondent 4 tried to daydream while sitting still, but the result was disappointing. He said:

If I daydream while being idle, I may daydream for a few minutes, but then I would have to get up and start walking. I guess it's because I lack concentration and focus, and walking somehow triggers my focus and attention to my imagination without being bothered by external factors.

Participant 37 described walking as directly affecting the realness of the daydream, in general, and the vividness of associated feelings.

...if I don't pace, it feels like I can't feel the genuine feeling in my daydream. Sometimes, the movement happens automatically, so if I try to stop moving, the vivid feeling in my daydream will stop, and that's very annoying...the only time I can be still while daydreaming is when I try to sleep.

Movement and MD are concurrent and intertwined. Stopping dulls the emotional vividness immediately and is willfully employed only to allow daydreaming to induce sleep. See the subtheme titled “Movement suppression for induced relaxation” below for an elaboration on the theme of movement suppression in the service of relaxation and sleepiness.

Six respondents assigned a hypnotic quality to the experience of stereotypical movement. For instance: “I can daydream without the pacing; however, the movement immerses me further into the daydream, and it feels as if I am in some trance that is difficult to come out of.” (33) The depth of the immersion instigated by the movement is portrayed as producing involuntariness and an altered state of consciousness resembling a hypnotic state. Interlocutor 16 described the employment of eye fixation, a known hypnosis induction technique (Cardeña et al., 2017).

If I lay [sic] down, I look at one fixed point to make the experience of talking with someone or moving in my daydream more real. But that’s totally voluntary. Like a plus. Most of the time, I daydream, staying still.

The ultimate aim of self-hypnosis here is to facilitate a fully immersed fantasy experience. Self-induced altered states of consciousness are enhanced by embodying the daydreamed chatter and behaviors with corresponding muscular activity to create the ultimate virtual reality experience.

Embodiment: Acting Out Scenes

The fantasy enactment in MD is eloquently described in the following excerpts:

“I constantly do the movements that correspond to the scene in my daydreaming. If I’m at a party, I dance. If I’m drinking something, I do the movement of drinking

with anything that looks like a bottle, a glass... When I was much younger, I would get into my dad’s car while it was parked in the garage, sit in the driver’s seat, and drive through the streets of my city, meeting people and waving from the car while listening to music.” (35)

The movement is a mirror to the movement that I am doing in the daydream. For example: if I am daydreaming about myself running and opening a door, I act out in the physical world as if I am actually there. I have gotten physically hurt a couple of times when I daydream about battle scenes because of this - I have injured my feet and legs several times. (14)

These qualitative data align with findings from quantitative research that demonstrated that proprioceptive input, for instance, posture (Cuddy et al., 2018), gestures (Cacioppo et al., 1993), and facial expressions, such as smiling or pouting, (Duclos & Laird, 2001) can influence affective responses. Furthermore, Van Geest et al. (2021) reported results from a study showing that a specific movement sequence based on movement elements associated with a particular emotion executed with a dance movement therapist can significantly enhance the corresponding affective state. In other words, some individuals with MD generate the “emotional score” of their fantasy and intensify it by performing in vivo the daydreamed action.

The themes of Enhanced focus and self-hypnosis and the Acting out scenes fit well with the bidirectional sensory-cortical embodiment model presented in Figure 2 above. The reported synchronized movement produces afferent neural stimulation. These bottom-up stimuli deepen the daydream experience by intensifying both the affect and the bodily experience. Participant 8 described the experience: “With a kissing daydream, I press the thumb and forefinger together to create a parallel sensation. The fingers are nimble enough to enhance the romance and sensuality of the experience.” With his fingers, he intentionally recreates the physical likeness of lips, so that when

simultaneously kissing a woman in his daydream and his fingers he generates a realistic multi-sensory stimulation that mimics the thrill of an actual sensual experience.

Movement Suppression for Induced Relaxation

In an attempt to perform a deviant case analysis (Patton, 2002), I searched for quotes that contradicted the importance of movement in MD or even showed a preference for immobility during MD. Specifically, I analyzed responses to my probes about the effect of stillness in daydreaming and my grand tour question: “How would it affect your experience if you were motionless during daydreaming?” The theme Need for movement ,already included a sub-theme of data associated with No need for MD-related movement. To supplement the data on MD motionlessness, I present evidence about the effects of MD-related movement suppression.

Five respondents spontaneously indicated that subduing the urge to move during MD induced a sense of relaxation appropriate for bedtime and conducive to sleep. For example: “It [being still] is relaxing and helps me to cope with social anxiety if it happens in public. If I daydream while lying in bed, it helps me fall asleep. The physically more passive daydreams are not as exhausting as the active ones.” (21)

The respondent describes how moderating his MD-related movements in public reduces his concerns about how others perceive him. He also explains how toned-down MD kinesthetics changes the energy in his daydreams and eases the process of falling asleep. Participant 14 exemplifies the cyclical embodiment model of kinesthesia in MD (see Figure 2).

I daydream without movement when I am about to fall asleep. The type of daydream that I have when I am lying down tends to be very intimate and soft - I avoid fast and gory daydream themes when I do this because those make me want to get up and pace. I believe it might be due to the contact of my skin with

something like my bed, pillow, or sheets. It is easier to pretend that someone is there with me. Those are the only times when I can daydream while being still. It feels like a highly protective environment and an even more immersive daydream.

She daydreams herself to sleep by creating a facsimile of an intimate bed scene. First, she deliberately suppresses vigorous body motions incompatible with the desired scene and the ensuing sleepiness (efferent stimulation from the sensorimotor cortex). She then incorporates the tactile stimulation of her soft bed linen into her fantasy (afferent sensory stimulation to the brain), resulting in a highly immersive but calm daydream experience.

The deviant case analysis of the data on movement suppression during bedtime supported the notion that the body plays a crucial role in MD even when its movements are restricted. This notion was further substantiated in MD situations where public self-consciousness precluded conspicuous actions.

Movement Suppression During Public Self-Consciousness

The bi-directional nature of physical activity in MD was evident in my respondents’ reports on movement inhibition in public. For example: “I force myself not to move when I daydream in public; it relaxes and helps me cope with social anxiety. If I daydream while lying in bed, it helps me fall asleep.” (21) It is unclear if this participant’s movement restriction serves as an anxiolytic or if it eases her public self-consciousness about being “discovered.” The following quote suggests that movement restrictions in MD can compromise the quality of the experience by forcing duller and less immersive daydreams:

The less movement I do, the less vivid the daydream and the easier it is for me to get taken out of the daydream...at night, when my daydreams are rarely intense, not moving much doesn’t seem to inhibit my daydreams. I find that daydreaming

without moving results in less vivid daydreams involving much less movement or action. When I stay still, there is less movement from the characters. (29)

Discussion

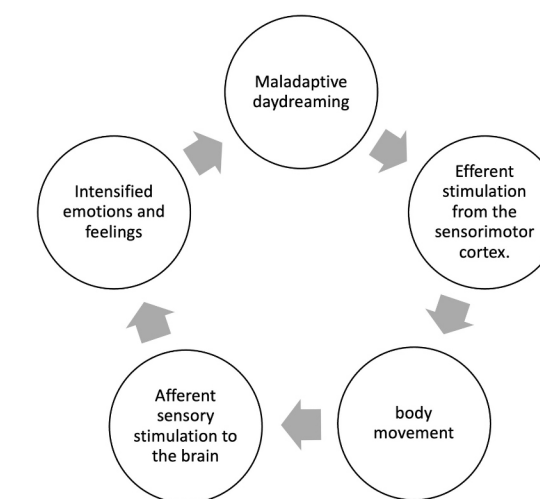
This sample engaged in a wide variety of intense MD-related physical actions, such as mouthing, pacing, and other stereotypical limb movements, as well as emotionally expressive actions like laughing, crying, hugging, and kissing. The intense expressiveness associated with MD is an indispensable element of the experience. While absorbed in their inner worlds of fantasy, my respondents exhibited the physical representations of the daydreamed actions. However, respondents were mindful of their dramatic body language and how onlookers might perceive it and resorted to employing more covert forms of body activation.

The sub-themes on movement suppression provided a more detailed description of the circumstances and consequences of movement suppression. By and large, movement during MD reflected the contents of their experienced fantasy. A similar process was demonstrated in sleep-related dreaming. Dresler et al. (2011) used polysomnography during lucid dreaming to circumvent the lack of conscious awareness during sleep. They showed that a predefined motor task in a dream elicited neuronal activation in the sensorimotor cortex. In other words, the authors demonstrated that specific content of REM-associated dreaming could be visualized by neuroimaging, which aligns with the assumption that motor imagery activation patterns largely overlap with motor execution activity (Jeannerod, 2006). It is conceivable that immersive daydreaming, with its intense sensory-emotional characteristics, generates similar concurrent activation in the sensorimotor cortex. However, unlike sleep-related dreaming associated with REM sleep paralysis (Mainieri et al., 2021), MD does not occur during sleep. Hence, the intense and often irresistible urges to move in synch with the unfolding daydream story.

About 65% of the sample spontaneously indicated that they experienced a complete sense of agency over their MD movement and suggested an opposite direction of causality, namely that movement facilitated their daydreaming. Embodiment theories can help explain this opposite MD-movement causality link. Body and movement are considered vital elements of thinking, feeling, perception, and action in embodiment theories and research (Winkielman et al., 2015). According to an embodiment model of MD (see Figure 2), the body's sensations and movements contribute to subjective experiences such as vivid daydreams (Neumann & Strack, 2000). In accordance with the James-Lange theory (1922), this movement behavior also influences our emotional experience through kinesthetic body feedback (Koch et al., 2014). The body receives and supplies sensory data to the brain through the central nervous system, which forms neural patterns. As a result, they contribute to the experience of emotions and feelings (Bechara and Damasio, 2005).

Figure 2

An Embodiment Model of Movement in Maladaptive Daydreaming



The data presented in this paper suggest that body awareness and the sense of agency during MD-related kinesthetics can be compromised while attention is focused on the unfolding fantasy storyline. Based on work in the cognitive neuroscience of action awareness and motor control, Evans et al. (2015) conducted experiments introducing spatiotemporal conflicts between cortical motor signals and their resultant sensory consequences during real-time brain control of a visual cursor. Their two experiments associated congruent brain-machine interfaces with a robust sense of agency. The sense of agency was undermined when the researchers introduced neuro-visual delay, and the cursor responded to movement commands in a belated mode. They concluded that bodily and brain-machine interface actions rely on common mechanisms of sensorimotor integration for agency judgments. Future neuroscience research should examine whether body movement unawareness in MD is also associated with perturbed proprioceptive feedback. Disturbed proprioceptive feedback in MD could impair the sense of agency in body movement. Because kinesthetics in MD is also intentional in many cases, I was curious how respondents understood its role.

To add rigor to this qualitative inquiry and explore the full range of the investigated phenomenon, I presented a negative case analysis (McPherson & Thorne, 2006) by identifying outliers and discussing data that might contradict the emerging salience of movement in MD. The subtheme titled *No Need* presents explicit examples of individuals who do not need to move during MD. That part of the manuscript provided data on the outcome of suppressing the urge to move in circumstances where inconspicuousness is preferable. It seems that kinesthetics plays a crucial role in MD even when curbed. We learn about the stimulating effect of movement by examining the impact of its suppression. When invigoration is not wanted, such as before sleep, immobility facilitates calmer fantasy storylines and a more subdued physical state. In situations where noticeability is undesirable, observable actions are restricted. The prominent role of movement in MD becomes evident also by examining negative cases. Daydreamers

report that inhibited motion induces tranquility and calmer fantasy scenes, favorable for bedtime daydreaming. When daydreaming in public, there is a conscious effort to conceal observable movement. Still, complete inaction seems complicated, as the daydreamers resort to more subtle gesticulations to animate their inner experience.

Clinical Implications

These results build on existing evidence that movement is common in MD as a significant number of participants identified body movement as a prominent feature associated with maladaptive daydreaming. This observation suggests that kinesthetic experiences may be a relevant factor to consider in understanding MD. Although adults are better at concealing the telling movements, these results should be considered in pediatric psycho-neurology clinics. Stereotypical movements in children could also be symptomatic indicators of potential MD (Freeman et al., 2010; Robinson et al., 2016).

The evidence suggests that some individuals with MD might control their fantasies by curbing their concomitant movements. One possible implication of this finding pertains to the employment of movement suppression in the treatment protocol for MD. Future research could shed light on the impact of body movement control on the recovery from MD.

The findings of this study have to be seen in light of some limitations. First, although the presented data provide a detailed description of the investigated phenomenon, the findings cannot be extended to the broader population of individuals suffering from MD, and its generalizability is limited. Though only future research can shed light on how individuals with MD who do not move while daydreaming differ from the current sample, evidence shows that 79% of individuals with MD report daydreaming-related kinesthesia (Bigelsen & Schupak, 2011). In other words, the present findings offer new inductive notions

on the possible roles movement plays in MD that should be the basis of hypothesis formulations for future deductive research.

The sample size in this study was modest compared to the standard in quantitative studies, adding a further challenge to the universality of the findings (Vasileiou et al., 2018). However, achieving data saturation, not statistical significance, is the prevailing principle in designing qualitative research. Theoretical saturation, as achieved in the current investigation of 41 interviewees, often occurs in homogeneous samples as small as 12 (Boddy, 2016). The following research step should involve replication studies and larger-scale hypothesis-driven studies on the function movement in MD.

The methodology in the current study necessitated continuous, direct contact with the interviewees. My involvement with them may have consciously or subconsciously affected their responses and my interpretation of the data. Respondents may have selectively provided answers they believed I, an MD researcher, might have expected to hear. It is also conceivable that my a-priori expectations might have biased my selection of data to be presented. To enhance the credibility of the presented findings, I kept meticulous records of my data and decision trails and discussed them with my research team and peers. Nevertheless, future research should strive to validate the bi-directional embodiment model of MD movement, presented in this paper, with more objective experience sampling and brain imaging studies.

Multiple in-depth interviews with individuals struggling with MD had two main findings about the function of movement during daydreaming. First, MD-related kinesthetics might enhance the daydreamers' experience by deepening their fantasy immersion through improved focus featuring self-hypnotic characteristics. Second, respondents reported that their body movements intensified the daydreaming experience by embodying the protagonists' actions. Occasional loss of the sense of

agency suggests a bi-directional feedback process in which afferent-efferent neuro-sensory processes might be activated during MD.

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**Körperbewegungen Während des Maladaptiven Tagträumens:
Eine Thematische Analyse von Asynchronen E-Mail-Interviews**
Eli Somer

Zusammenfassung: *Zielsetzung:* Ziel dieser Studie war es, die gelebte Erfahrung stereotyper Körperbewegungen und Gesten während maladaptiven Tagträumens (MD) zu beleuchten. *Methode:* Einundvierzig Personen mit wahrscheinlicher MD nahmen an asynchronen, ausführlichen E-Mail-Interviews teil. *Ergebnisse:* Es ergaben sich vier Themen, die das Bewegungserlebnis bei MD beschreiben: Bedürfnis, Vielfalt, Bewusstheit und Handlungsfähigkeit sowie Funktionen. Die Analyse ergab zwei wesentliche Erkenntnisse über die bidirektionale Wirkung von Bewegung auf MD. Erstens könnte Kinästhesie die Erfahrung der Tagträumer verbessern, indem sie die Vertiefung ihrer Fantasie durch eine verbesserte Konzentration mit selbsthypnotischen Eigenschaften fördert. Darüber hinaus berichteten die Befragten, dass ihre Körperbewegungen das Tagtraumerlebnis verstärkten, indem sie die Handlungen der Protagonisten verkörperten. MD-bezogene Bewegungen waren mit einem gelegentlichen Verlust der Handlungsfähigkeit verbunden, was auf eine unbeabsichtigte neuromuskuläre Aktivierung hindeutet.

German translation: Eberhard Bauer

Movimentos Corporais Durante “Devaneios Excessivos” (Maladaptive Daydreaming): Uma Análise Temática de Entrevistas Assíncronas por e-mail
Eli Somer

Resumo. *Objetivos:* Este estudo teve como objetivo lançar luz sobre a experiência vivida de movimentos corporais estereotipados e gestos durante os chamados “devaneios excessivos” (Maladaptive Daydreaming - MD). *Método:* Quarenta e um indivíduos com provável MD participaram de entrevistas assíncronas aprofundadas, por e-mail. *Resultados:* Surgiram quatro temas que descrevem a experiência de movimento na MD: Necessidade, Variedade, Consciência e Agência, e Funções. A análise revelou duas conclusões principais sobre o efeito bidirecional do movimento no MD. Primeiro, a cinestesia pode ampliar a experiência dos indivíduos, aprofundando a imersão na fantasia por meio de um foco aumentado com características auto-hipnóticas. Além disso, os entrevistados relataram que seus movimentos corporais melhoraram a experiência com os devaneios ao incorporar as ações dos protagonistas. Os movimentos relacionados ao MD foram associados à perda ocasional de agência, sugerindo ativação neuromuscular não intencional.

Portuguese translation: Antônio Lima

**Movimientos Corporales Durante la Ensoñación Desadaptativa:
Un Análisis Temático de Entrevistas Asíncronas por Correo Electrónico**
Eli Somer

Resumen. *Objetivos:* Este estudio investigó la experiencia del movimiento corporal estereotipado y la gesticulación durante la ensoñación desadaptativa (*maladaptive daydreaming* o MD). *Método:* Cuarenta y un individuos con probable MD participaron en entrevistas asíncronas en profundidad por correo electrónico. *Resultados:* Surgieron cuatro temas para describir la experiencia de movimiento en MD: Necesidad, Variedad, Consciencia y Agencia, y Funciones. *Conclusión:* Los resultados arrojan dos conclusiones principales sobre el efecto bidireccional del movimiento en la MD. En primer lugar, la cinestesia puede mejorar la experiencia de los soñadores despiertos al profundizar su inmersión en la fantasía a través de una mayor concentración con características autohipnóticas. Además, los encuestados afirmaron que los movimientos de su cuerpo mejoraban la experiencia de soñar despiertos al encarnar las acciones de los protagonistas. Los movimientos relacionados con la MD se asociaron con la pérdida ocasional de agencia, lo que sugiere una activación neuromuscular involuntaria.

Spanish translation: Etzel Cardeña

Exploring Cognitive Processes Used by Mediums During Alleged Communication with the Deceased¹

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Abstract: *Objectives:* This study aimed to gain some understanding regarding the type of self-reported cognitive strategies involved in the mediumistic process. *Method:* Semi-structured interviews were conducted with 19 Spiritualist medium tutors and the content was analyzed using a reflexive Thematic Analysis (TA) approach. *Results:* This analysis identified three main themes: focused attention and inhibition of distractions, multitasking behaviors, and memory-related phenomena, which could be associated with components of executive functions. *Conclusion:* These themes suggest that mediums may use specific cognitive processes to initiate and maintain alleged communication with discarnate personalities. The implications of such findings are discussed.

Keywords: Spiritualist, mediumship, medium, executive function, cognition, thematic analysis

Highlights

- Three self-reported medium cognitive strategies were identified: focused attention and inhibition of distractions, multitasking behaviors, and memory-related phenomena.
- The cognitive strategies were associated with three core executive functions: inhibitory control, cognitive flexibility, and working memory.
- There were three sub-components to focused attention and inhibition ability: focusing attention, avoiding eye contact, and handling external distractions.
- The sub-components to multitasking behaviors were: switching between multiple discarnate personalities, switching back to the recipient, and being self-aware.
- The sub-components to memory-related phenomena were: experiencing tip-of-the-tongue, associating memories to the discarnate personality, and gaining information from the discarnate personality.

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Mediumship typically, though not always, involves three individuals: the medium who receives the ostensible anomalous information, the recipient who validates or rejects the information conveyed by the medium, and the discarnate personality, the alleged source of such information (Rock, 2014). The claims of spiritualist mediums to ostensibly communicate with the deceased have been a topic of research and debate for over a century, notably commencing with the formation of the Society for Psychical Research (SPR) in 1882, which in turn led to the founding of other societies around the world (Alvarado, 2002).

Historically, most investigations with mediums have been proof-oriented, seeking to confirm whether the communications can be verified in terms of accuracy and support claims of discarnate survival (Irwin & Watt, 2007; Roe, 2012; Wiseman & Morris, 1995). This type of research has produced a growing body of evidence suggesting that the information conveyed by mediums is often considered highly relevant by the intended recipient of the communication (Beischel & Schwartz, 2007; Roy & Robertson, 2001; Schwartz et al., 2003). However, despite recent studies being designed to eliminate conventional explanations (e. g., cold reading) and telepathy as explanations for the information received (Beischel & Schwartz, 2007) or other paranormal explanations such as super-psi (Tressoldi et al., 2021), the debate continues regarding the nature and source of this information (Beischel & Rock, 2009; Braude, 1992, 2014; Sudduth, 2009). Nevertheless, the conclusion from two recent quantitative meta-analysis reports supports the growing body of literature suggesting that accurate information can be obtained by the mediums (Bastos Jr et al., 2015; Sarraf et al., 2021) and proposes that some individuals in certain circumstances may be able to intentionally obtain information about a deceased personality through means unknown by the researchers. Such findings have led others to explicitly declare that the logical conclusion of such results is that "...in some cases, the sources of the information are the deceased themselves..." (Tressoldi et al., 2021, p. 1).

A complementary method to mediumistic research that may offer new insights takes a more process-oriented approach that involves researchers shifting their emphasis away from examining the veracity of any communications to how this information is obtained and what psychological processes may be involved (Beischel & Rock, 2009). For example, Alvarado (2010) suggested that research with mediums should include examining the various cognitive processes involved, as this may help provide additional insight into the psychological components involved in mediumship.

Cognitive processes include essential functions of memory, attention, and perception. The term executive function encompasses a sub-set of higher-order cognitive processes that include the ability to attend to a chosen task while inhibiting distractions, cognitive flexibility to adjust to changing demands, and working memory to hold and manipulate information in the mind (Diamond, 2013). Importantly, all these executive functions contribute to an individual's everyday functioning (Cristofori et al., 2019; Friedman & Miyake, 2017) and are essential for healthy cognitive, social, and psychological development (Lunt et al., 2012).

Despite knowledge of the existence of the various components of executive functions, there remains to be clarity regarding the mechanisms surrounding the control processes involved in regulating these cognitive subprocesses (Monsell, 1996). This has led to models of executive functions being largely dependent on the researcher's definition and perceived relation between cognition and behavior (Alvarez & Emory, 2006). For example, Luria (1973) proposed that executive functions were a collection of frontal lobe structures and components necessary for effective problem-solving behavior. On this basis, he proposed a model that resulted in the identification of three distinct components necessary for effective problem-solving behavior: (1) arousal motivation, (2) information receiving, processing, and storing; and (3) programming, controlling, and verifying, which also has executive control over the other components.



Later, Lezak (1982) saw executive functions as a collection of mental capabilities required to plan and implement the behavior necessary to achieve the desired objective. This led to the suggestion that three components would be necessary to fulfill this behavior; (1) shifting between the task of mental sets, (2) inhibiting irrelevant automatic responses, and (3) updating mental representations held in working memory.

Building upon Lezak's model, Stuss and Benson (2019) proposed another executive function model that incorporated Luria's components with the inclusion of an additional component to initiate behavior to accompany the planning, sequencing, and organization components. At the same time, holding on to the commonly held belief that these components are functions residing primarily in the frontal lobe (Stuss, 2011). However, functional neuroimaging studies have started to challenge this idea. Although the frontal lobe is strongly implicated in the participation of executive function, it is now agreed that without input from other cortical structures the performance of executive functions would be severely impaired. Therefore, it may be more appropriate to conceptualize executive functions as macro-construction of neurological structures working together to solve problems (Alvarez & Emory, 2006).

Executive function-related behaviors associated with neurological structures have given rise to the notion that any individualized differences in these behaviors due to trauma or genetics are consequently considered a dysfunction of executive functions (Elliott, 2003). Models with a clinical bias have been proposed (Mateer, 1999). One such clinical model used in the observation and assessment of patients suspected of some executive dysfunction (Sohlberg & Mateer, 2017) consists of six components of impairment in the individual's ability in: (1) initiation of the cognitive system, (2) response inhibition to stop automatic tendencies, (3) task persistence to maintain task behavior to completion, (4) organizing and sequencing of information necessary to complete the



task, (5) generative thinking necessary for flexible thinking, and (6) awareness to monitor one's behavior.

More recently, executive functions have also been seen in a broader context. Although they are still associated with the prefrontal cortex, they are now proposed to be a set of cognitive control mechanisms necessary for individual control and self-regulation of behaviors and thoughts (Mischel et al., 2011; Moffitt et al., 2011). This context led Miyake et al. (2000), Miyake and Friedman (2012), and Friedman and Miyake (2017) to suggest that three components would be required for individual self-regulation and control: (1) Inhibition, responsible for attentional control of thoughts and behavior while overriding impulses from intrinsic or extrinsic sources; (2) updating, involving working memory and included holding and working with information held in mind; and (3) shifting, which opposes rigidity of thought and behavior by supporting the ability to multitask, changing perspectives, thoughts, and demands for mental resources.

Considering the first of these three components of executive functions (inhibition), mediumship may also necessitate an ability by mediums to attend to their internal sensory stimuli (discarnate personality) while inhibiting distracting stimuli such as the medium's thoughts and external noises (Stanford, 1993). Therefore, it seems reasonable to speculate whether mediums use specific cognitive strategies in mediumship and whether these cognitive strategies demonstrate the use of specific components of executive functions.

However, it is not the first-time executive functions have been implicated in the reception and processing of anomalistic information. Honorton (1974) proposed that "psi impressions," such as mental images received by participants in psi research studies, are relatively weak compared to sensory input from the participants' sensory organs. This suggested that participants in psi research need to have significant executive functioning

ability to intentionally reduce sensory noise processing while increasing awareness of their internal processes and feelings (Braud, 1975).

Further, the importance of executive functions in the reception of anomalous information is again implicated in the ethnographic account given by spiritualist medium David Wilson (2015). He describes his experiences while attending a development circle at Portobello Spiritualist Church in Edinburgh, UK, and recounts the importance of various cognitive processes in demonstrating mediumistic communication. Pointing out that there is some knowledge within the practice of mediumship that Wilson refers to as insider understanding that is not commonly understood or known outside the spiritualist community. This *insider understanding* details how individuals who desire to develop any mediumistic ability must learn to enter a sustained and focused state; otherwise, the individual becomes intermittently unproductive in conveying the alleged communication from a discarnate personality (Wilson, 2015).

Although the role of executive functions has been implied in psi and mediumship research, no formal published research has focused specifically on the role of executive functions in mediumistic communication. This represents an underexplored area that may provide fruitful insights into mediumship phenomena and the mediumistic process. Such knowledge may help understand how mediums obtain and discern ostensible discarnate information. Furthermore, identifying which, if any, executive functions may be helpful during mediumistic communications raises the additional question of whether trained mediums would exhibit distinct differences in these functions compared to non-mediums. This study aims to explore which, if any, components of executive function are utilized within mediumistic communication.

Method

Participants

A snowball sampling approach was adopted to identify potential participants. Because currently there is no legal statute in the UK, USA, or other European countries for individuals who refer to themselves as being a medium and offer mediumistic services to have undergone any training or assessment of competence (Greenfield et al., 2012), only mediums accredited and recognized by a spiritualist organization, such as the Spiritualists' National Union in the UK and the National Association of Spiritualist Churches in the US, as having mediumship ability of a standard accepted by the organization and able to tutor others in mediumship were invited to participate. Further, it has been suggested that when collecting qualitative data rapport must be established between researcher and participant to ensure that participants are suitably empowered to give a full and frank account of their experience (Smith, 1995). For this reason, initial contact was made with participants within the UK Spiritualist community and known by the principal researcher (CC), who is himself a member of the Spiritualist religion, before snowballing to other participants that met the study selection criteria.

In total, 19 participants (14 female, five males; mean age 58.6 years, $SD = 10.2$ years; range: 40 – 81 years) consented to participate in the study. Of these, 13 were based in the UK; three in the USA, two in Australia, and one in Germany. Each participant had worked publicly as a medium for between eight and fifty years ($M = 23.5$ years, $SD = 10.2$) and regularly conducted private sittings or public mediumship demonstrations monthly where evidential information would be presented in a public forum, such as a church or meeting center ($M = 19.5$ /month, $SD = 19.1$ /month; range: 1-60 per month). All participants were members of Spiritualist organizations that had accredited their ability as either a medium or mediumship tutor, with some holding multiple accreditations for their chosen

discipline: Ordained Ministers = 10; Demonstrator (medium) = 17; Public Addresses (philosophy) = 16; Teaching = 15; Healing = 10.

Materials

An online survey was used containing demographic questions (e. g., age, sex) and questions to capture the participants' mediumship experience consisting of the number of years of experience (*"How many years have you been publicly demonstrating your mediumship?"*), the average number of demonstrations of mediumistic communication given in a public forum, e. g. church, in a typical calendar month (*"On average, how many demonstrations in a single calendar month would you expect to do (including private sittings)?"*) and details of accreditations held as a medium, tutor or other discipline recognized by the spiritualist organization, e. g., minister, public speaking, and spiritual healing.

Procedure

The study consisted of two phases. First, participants meeting the selection criteria were contacted through email with a summary explanation of the purpose of the study and asked if they were interested in finding out more. The study was explained to all the participants as an explorative investigation to understand further the psychological processes used by mediums to facilitate a demonstration of evidential mediumship. All participants responded positively to participating in the study so they were sent an email directing them to an online Qualtrics survey which gave full explanations of the study. Participants who consented to participate in the study were then requested to complete a series of demographic questions, identifying their accreditations with a spiritualist organization and how long they had been practicing publicly as a medium.

In the second phase, all those who had previously agreed to participate were contacted for a face-to-face interview conducted online using Zoom; participants

consented to have the interview recorded. Interview questions were prepared (see Appendix A), and the study adopted a semi-structured interview methodology, with the direction being very much led by the participant. Each question was designed to elicit the participants' thoughts on how their mediumship functions, based on their memory of past occasions of communicating with a discarnate personality. Once the participant had completed responding to the interview questions and had nothing further to add, consideration was given to bring the interview to a particular question or expand on something said earlier by the participant. Once all the questions had been asked, the recording was stopped, and the participant was debriefed. This study had ethical approval from the Canterbury Christ Church University Faculty of Science, Engineering, and Social Sciences Ethics Panel (Ref: ETH2121-0119).

Data Analysis

The audio from each interview was uploaded to a web-based audio-to-text transcription service (www.otter.ai). The transcribed text file was checked by listening to the audio file and correcting transcription errors. Each interview was then imported into Nvivo 12 to enable text coding and theme generation.

Braun and Clarke (2006) provide a clear framework to enable researchers to conduct a Thematic Analysis (TA) within psychology, detailing six phases from: (1) becoming familiar with the data, (2) coding, (3) generating, (4) reviewing, and (5) defining the themes, to (6) writing up the findings. Adopting a reflexive TA approach allows for different orientations and approaches, including deductive, semantic, latent, realist (critical), and constructionist methods of analyzing the data (Braun & Clarke, 2019). The flexibility of thematic analysis as a tool in qualitative data analysis made this an appropriate method for this study. Therefore, to address the research aim, this study adopted a deductive TA approach but limited the analysis, coding, and theme development to identifying components of executive functions within the text.

To generate relevant themes, full familiarization of the text and coding was conducted at a rate of one interview per day to reduce the potential bias in coding from previously remembered generated codes. An iterative process followed with generated codes being reviewed along with the associated sections of text before being grouped to form several distinct themes, each containing several sub-themes. Adopting an iterative process to theme generation, as Braun and Clarke (2006) recommend, each theme was further reviewed to ensure each code's applicability and only when the analysts were satisfied was the theme name finalized.

Results

Thematic Coding and Themes

Analysis of the interviews resulted in the generation of three main themes: focused attention and inhibition of distractions, multitasking behaviors, and memory-related phenomena, each with three sub-themes, as shown in Table 1.

Table 1

Generated Themes and Sub-Themes

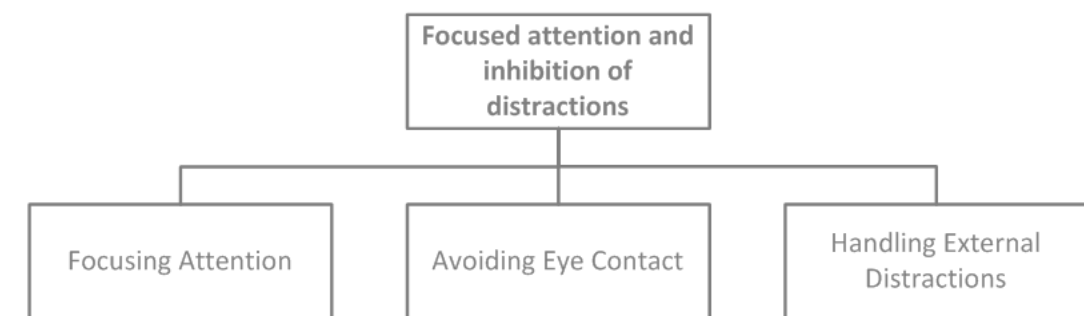
Theme	Sub-theme
Theme 1: Focused Attention and Inhibition of Distractions	1.1 Focusing Attention
	1.2 Avoiding Eye Contact
	1.3 Handling External Distractions
Theme 2: Multitasking Behaviors	2.1 Switching between Multiple Discarnate Personalities
	2.2 Switching back to the Recipient
	2.3 Being Self-Aware
Theme 3: Memory-Related Phenomena	3.1 Experiencing Tip-of-the-tongue
	3.2 Associating Memories to the Discarnate Personality
	3.3 Gaining Information from the Discarnate Personality

Theme 1: Focused Attention and Inhibition of Distractions

This theme consisted of codes that identified the importance for mediums to have the capability to focus their attention upon a chosen stimulus but also to hold awareness of that stimulus from among competing stimuli. This theme generated three sub-themes: focusing attention, avoiding eye contact, and handling external distractions, see Figure 1.

Figure 1

Focused Attention and Inhibition of Distractions Theme



1.1 Focusing Attention

The mediums frequently spoke of the need to focus their attention on a distinct stimulus. Depending upon the purpose and intention, this was referred to in several ways: "energy", "the spirit world", and "the power". It was evident from the context in which these terms were used that they represented a real and tangible reality for these mediums, relating to mental space, a feeling or object that mediums may be aware of by focusing their attention on it.

"And I give them my whole attention till I successfully build that bridge to their loved one. And I don't become distracted by anything else or anyone else." – Medium 1.

"And then again, I move my mind to that, to that world. And, erm, I feel the connection between that world and myself." – Medium 4.

"...so I feel that my primary attention is with spirit.." – Medium 15.

"...because I focus very much on the energy to take me there. And as soon as I make the connection, I just, it's almost as if I imagine Spirit are so close they become me if that makes sense." – Medium 18.

1.2 Avoiding Eye Contact

Mediums also spoke of the desire to avoid eye contact with the recipient. Many felt this could distract them from the discarnate personality ("...spirit world") from where the information is alleged to originate. Hence, they were peripherally aware of the recipient, focusing mainly on the discarnate personality. Medium 13 went further and explained how they felt eye contact with the recipient could influence the communication they received from a discarnate personality with their own thoughts and prejudices.

"...we say we're aware of the spirit world in our peripheral. Well, I'm not I'm aware of the people on the peripheral. They're secondary to me..." – Medium 1.

"And what happens that is I try not to be in direct eye contact with somebody at that point. Because I don't want my own information coming in, I don't want my own prejudices or thoughts coming in, at that moment of time, most of the time, I can handle that..." – Medium 13.

"I try not to look at people sometimes. Because sometimes I just go above their head because sometimes you get that pull..." – Medium 17.

1.3 Handling External Distractions

Eight mediums expressed concern about external distractions impacting their ability to remain focused on the discarnate personality, three of whom recalled that during their early mediumistic development, they needed to communicate with a discarnate personality while their tutor deliberately created distractions around them. They later used this exercise themselves as tutors with students within their development groups.

"...one of the exercises I used with my students when I was teaching mediumship development in person, I would literally make students stand up in front of the class, I would literally have two or three students walking back and forth between the congregation or the group, and the medium delivering the message" – Medium 11.

"So when we were in development, there would be purposely noises put into the group into the class, windows opened doors open whatever it happened to be, so we could learn to focus and, that was a great lesson." – Medium 13.

"So early on, when I was, hardly knew what I was doing, and he was doing his development classes, he always made us practice being in that space, no matter what was going on around us. And I didn't understand until more recently; how that helped me be a stronger medium. He would walk in front of us and make noise and make us keep going with the message." – Medium 15.

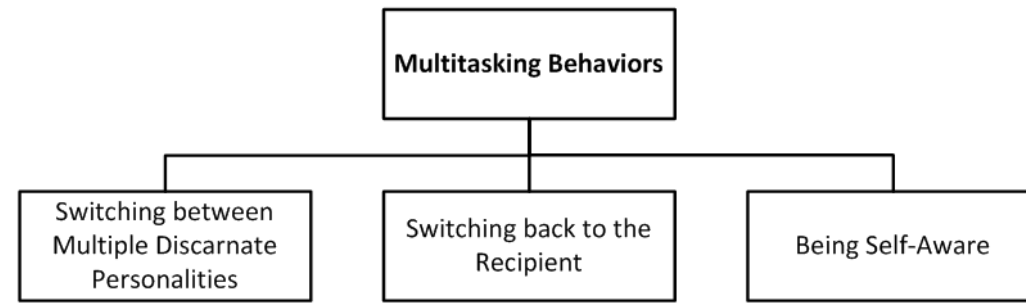
Theme 2: Multitasking Behaviors

The mediums interviewed recalled three specific circumstances that would typically occur during a mediumship demonstration, which necessitated the need for the mediums to adopt a multitasking behavior. These included the need to maintain their awareness of the target discarnate personality while attending to other multiple

discarnate personalities, switching back to the recipients ,and being self-aware, see Figure 2.

Figure 2

Multitasking Behaviors Theme



2.1 Switching Between Multiple Discarnate Personalities

Mediums often recalled situations when giving information to a recipient from a discarnate personality; they would then become aware of a second discarnate personality they deemed to be interrupting the initial communication. In these situations, the mediums spoke of how they would often mentally communicate with the second discarnate personality in the same way they would if interrupted in a conversation with friends. By acknowledging them and then asking them to wait their turn. Conversely, some mediums spoke of how they would shift from one discarnate personality to the other, going between their respective recipients and giving communications and evidence to both.

The selection criteria for this study were designed to ensure that only experienced mediums participated. This was evident in the confidence the mediums reported having in their ability to maintain their awareness of the initial discarnate personality. Knowing that they would be able to move their awareness to the second discarnate personality once the original communication had been completed. Again, this sub-theme

demonstrates the perception of the mediums to accept discarnate personalities as physical objects occupying a physical reality. When interruptions occur, already-developed multitasking skills are used, arguably acquired from typical day-to-day interactions.

"... and then I realize I've got two communicators there. And sometimes, I've done both communicators. I've just said to one person, can you just wait? I think I've got two, and then I'll go to the one person, and then I'll go to the other, but sometimes I get a feeling inside whether I should go. Nope. This is purely for that person. And this is important, all of a sudden I'm like. Oh. Hang on a minute, I want to go to that person over there and that person over there.." – Medium 2.

"And so, in that they showed me while I could be with two people, there were two separate communicators. So, I don't know if that answers your question. It just showed me that I could hold the two different people to different recipients of messages. And they're two different family members and move between them." – Medium 11.

"...just deal with that, like I would in a room full of people. I just sort of in my thoughts. I speak to them. And I just say you're all very welcome. But I can only talk to one person at a time." – Medium 12.

2.2 Switching back to the Recipient

Mediums also recalled the need to be aware of the recipient *"to check in with them"* or to check if the communication being given was understood without losing their awareness of the discarnate personality. The mediums perceived sharing their awareness between the discarnate personality and the recipient, with most of their awareness placed upon the discarnate personality.

"I hold both, I would say, this is what I always tell my students probably 80 to 90, well, yeah, 80 to 90% of my focus is with the spirit world. And I have a small amount of focus on my recipient, just checking, just to check in with them." – Medium 8.

2.3 Being Self-Aware

Mediums spoke of developing an internal self-awareness that informed them of the correctness of the information conveyed. Many mediums perceived this as feedback between their awareness of the discarnate spirit and the recipient, from which they reported to energetically and intuitively sense if the information they were giving was correct. This feedback was happening while maintaining their awareness of the discarnate personality, checking in with the recipient, and managing possible interruptions from secondary discarnate personalities.

"But the main important thing for me is, I will go back to my if you want to call it the intuition, the sensing, and I will double-check between the energy of the communicator and myself if what I've got is totally correct. And there's, I can't describe it, it's very hard to describe, but there's a way that I will know, I will know without a shadow of a doubt that what I am perceiving is correct..." – Medium 12.

"And it's so clear that I know I'm not wrong... And then if I feel I'm not right, I'll just say, would anyone understand this?..." – Medium 2.

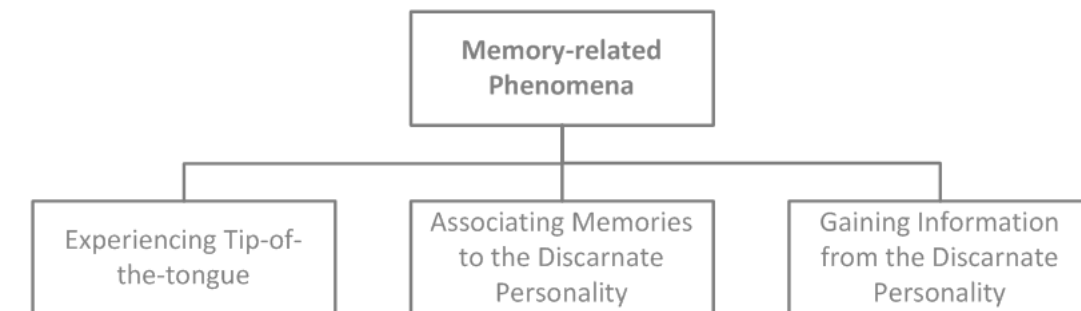
"... It's almost like it's more than a gut feeling because you rely on it. Because in our work, we rely on it, it becomes a part of us. And you feel that compatibility, you feel that it's almost like a rubber stamp of saying yes, I know I'm with the right person, or yes, I know that's right..." – Medium 4.

Theme 3: Memory-Related Phenomena

This theme described the memory-related phenomena used to convey accurate evidential information through mediums during a mediumship demonstration. Within this theme, three sub-themes were generated: experiencing tip-of-the-tongue, associating memories to the discarnate personality, and gaining memories from the discarnate personality (Figure 3).

Figure 3

Memory Use Theme



3.1 Experiencing Tip-of-the-Tongue (ToT)

Several mediums noticed that they would often experience a lapse of memory during a mediumship demonstration, akin to the tip-of-the-tongue phenomenon (Brown, 1991). During this period, the medium would typically experience the need to mention a particular object (e. g., the make of a car or to address by name a recipient in the congregation) but would find that, for a brief period, the word or name would fail to emerge from memory, even though they knew what it was they wished to say.

"This is the thing that happens to me very, very often, I know I need to speak to Chris. Chris is there in the audience, and I know Chris's name. Can I heck, like, remember it? And I'm looking at you, and I think, what do I do, and then people then assume I'm cheating or

play-acting. Because I know Chris, I can't get his name. It just won't come to me." – Medium 1.

"You can feel the blank canvas of your mind, and then you're searching around in the space. Sometimes the word isn't there." – Medium 2.

"I get the congregation to work it. Again, it's that relationship, just like, What's that? What's that old Ford car that used to be around in the 60s? I can't remember the name of it. Ford Anglia. Yep, that's it." – Medium 6.

"There's a lapse of memory in terms of I might be giving a, you know, a contact to someone who I know their name, but while I'm demonstrating, I cannot remember their name." – Medium 8.

3.2 Associating Memories to the Discarnate Personality

The mediums acknowledged that they were aware of their memories and experiences surfacing during a demonstration. They would interpret this as an attempt by a discarnate personality to symbolically suggest a specific item of evidence that needed to be conveyed to the recipient. For example, if the medium became aware of a memory of their father surfacing, they took this to mean that the relationship between the discarnate personality and the recipient could be that of a father and child. Likewise, memories of particular experiences belonging to the medium may also surface and serve as symbolic evidence to the recipient.

"I very much agree that our memories are the Spirit worlds library," – Medium 1.

"...but definitely on occasions where I might be taken into a memory a certain age living in a certain place. And then when that happens, I know that it's talking about experiences in that time of life or the sitter..." – Medium 12.

"...I do agree with that. And I'm, in part anyway, because I believe that they can, they use our memory banks in some sorts of ways and our experiences." – Medium 14.

A medium, recognized within the spiritualist community as capable of providing evidence containing specific dates relevant to the recipient, explained how they capitalized on knowing that their memories might sometimes be used in discarnate communication. The medium in question would often adopt a mental strategy of consciously giving the alleged discarnate personality a choice from their memory of notable dates, such as family birthdays and national holidays.

"Well, I've taught my students this, and I do this as well. ... So, you've obviously got your January to December. So, I put in all the public holidays in my mind's eye. Then I put all my family's birthdays and passing. And so, you've got quite a lot there. You know, and obviously, our bank holidays are different from yours, but I still know English ones, it's still in my mind. And so, then I say to the spirit world, you take me to a date that is one of them." – Medium 17.

3.3 Gaining Information from the Discarnate Personality

The mediums also stressed their belief that the communication between the discarnate personality and the medium was achieved through the cooperation of the medium, allowing their thoughts to be influenced by the discarnate personality. In this way, the discarnate personality could use the semantic and episodic memory of the medium to construct the desired communication. However, the mediums felt it was also necessary to develop their mediumistic ability to a point where the information gained from the discarnate personality is relevant to the recipient but considered outside the medium's current body of knowledge.

"...somewhere there has to be space for the intelligence of that communicating spirit. For example, a brain surgeon communicates, can he not? Can you not talk? Does that mean he can't talk about his brain surgery? You know, of course, he can. Though I may not understand what he's gonna say to my client." – Medium 6.

"...So, I mean, I've been a gay man, I felt as if I was a gay man dying [with AIDS] with all the lesions that they get on their body. His mother was sitting next to me. ... And afterwards, she said, I'm going to call you my daughter-in-law, he's told you more than he's ever told anybody. So, I could have no concept of what it was for a man to be a gay man, to have a sexual experience as a gay man, to feel these lesions on my skin." – Medium 7.

"...would say they give us far more than what we've got. I would probably say that in the early days, memories would be provoked, but in later days, far less so." – Medium 8.

Discussion

This study adopted a thematic design to determine the self-reported cognitive strategies used by mediums to communicate with discarnate personalities; and explored whether these strategies suggest using specific components of executive function. The results from the thematic analysis suggest that the self-reported cognitive strategies conveyed by the mediums interviewed could be grouped into three themes that relate to the task of mediumship. Further, analysis of these themes produced three separable components of executive function, as posited by Friedman and Miyake (2017) and Diamond (2013), shown in Table 2.

Table 2

Generated Themes and Executive Function

Themes	Executive Function	
	Friedman and Miyake (2017)	Diamond (2013)
Focused Attention and Inhibition of Distractions	Inhibition	Inhibitory Control
Multitasking Behaviors	Shifting	Cognitive Flexibility
Memory-related Phenomena	Updating	Working Memory

Inhibition involves suppressing internal and external stimuli to control our attention, behaviors, emotions, and thoughts (Diamond, 2013). This ability allows individuals to control their impulses to prepotent stimuli and permits the individual to selectively attend to the chosen stimuli (Diamond, 2013; Miyake et al., 2000). Neurological studies suggest the prefrontal cortex is the source of the inhibitory control of other brain regions (Tabibnia et al., 2011) and is supported by lesion studies on patients with observed impairment in inhibitory control (Stuss & Alexander, 2000).

Inhibitory control also manifests within individuals as the ability to *focus* and *maintain* their attention on their chosen stimuli to complete a task despite competing stimuli, some of which may be more interesting or rewarding. Without individuals being able to delay their immediate gratification, they would never be able to sustain their attention on a task for longer than the next interesting or compelling thought (Diamond, 2013).

Previous research has suggested that participants' success in psi studies may be linked to their ability to selectively attend to a target while inhibiting distracting information (Honorton, 1974; Stanford, 1993). Likewise in this study, mediums acknowledged the importance of focused attention and inhibitory control when communicating with a discarnate personality.

Further, it was apparent that there was concern amongst the mediums that becoming distracted could interrupt the process of discarnate communication. Hence, they would often take practical measures to limit potential distractions while demonstrating, such as not looking directly at the recipient. In addition, realizing the importance of maintaining attention and limiting distractions, the mediums interviewed actively sought to improve this ability during their training and recounted how distractions would be deliberately introduced into their environment while giving practice demonstrations in their early development. Furthermore, it can also be argued that seeking to avoid eye contact with the recipient has a secondary benefit of challenging the skeptics' claim that such alleged discarnate communication is achieved primarily through cold reading techniques; involving the medium being led by body language and facial expressions (Dutton, 1988; Hyman, 1981; Sarraf et al., 2021).

Significantly, this research also expands upon previous studies (Braud, 1975; Honorton, 1974; Wilson, 2015) by introducing two additional components of executive functions utilized by mediums: multitasking and memory-related phenomena. Multitasking, also referred to as task switching (Diamond, 2013) or shifting (Friedman & Miyake, 2017), represents the executive ability to switch between multiple complex tasks, mental sets, or operations (Monsell, 1996) and was reported by all the mediums interviewed. In particular, they shared experiences when they were consciously aware of multiple discarnate personalities vying for attention while communicating with a single discarnate personality. These situations required the mediums to multitask and switch

their awareness between multiple discarnate personalities, often emerging as interruptions, while simultaneously attending to one or more recipients.

When questioned why such interruptions would occur, the mediums suggested that the interruption was often a conscious act made by discarnate personalities competing for their attention. It was apparent from the interviews that this was a common situation that mediums would find themselves in, and they had developed simple strategies to overcome these situations. By treating discarnate personalities as physical person and requesting that they move aside or wait their turn, the mediums suggest they could switch their attention between the original discarnate, other interrupting discarnate entities, and the recipient. However, it is unclear if the mediums resolved the interruptions because of the cooperation of the discarnate personalities or whether acknowledging the interruption allowed time for the medium to reattend to the initial discarnate personality cognitively. Nevertheless, it does raise an interesting question about what processes enable a medium to differentiate between two or more discarnate personalities and is something that future research could pursue.

The mediums also shared reports of needing to be self-aware to assess the accuracy of the information given to them by the discarnate personality. This involved the medium multitasking attention between the discarnate personality and being self-aware of what was being conveyed. Doing this provided the mediums with an internal feedback loop that enabled them to assess whether their interpretation of the information conveyed to the recipient was correct. Many of the mediums reported that they would only give information received from a discarnate personality if their self-awareness verified its accuracy. Because of time constraints, this study did not have the opportunity to explore the possible mechanism behind this self-awareness. However, identifying this behavior within the mediumship process may encourage future researchers to further explore it.

The third theme involved memory-related phenomena and refers to the working memory component of executive function. Working memory is responsible for holding, updating, and monitoring mental sets and representations held in the mind (Friedman & Miyake, 2017; Miyake et al., 2000). This component of executive functioning constantly monitors and codes incoming information for its relevance to a task being performed, replacing old and irrelevant items from working memory with new relevant information sets (Morris & Jones, 1990). Working memory enables the individual to hold information in mind, incorporate new ideas, consider alternatives, see relations between individual items in mind, and, importantly, manipulate this information (Diamond, 2013).

As a subtheme identified under the theme of memory-related phenomena, experiencing tip-of-the-tongue refers to when an individual has retrieved the lexicon of a required word from memory but cannot retrieve the phonological label to that word (Brown & McNeill, 1966). Therefore, individuals often experience a feeling of knowing the word (Schwartz, 2008; Brooks et al., 2021) they cannot vocalize, leaving them silent as they try to retrieve the phonological label. Though not explicitly a component of executive function, the literature suggests ToT can be associated with deficits in executive functioning that impact the phonological loop access, leading to individuals experiencing ToT, as seen in individuals with mild cognitive impairments (Juncos-Rabadán et al., 2013) and with the decline of executive function performance due to aging (Juncos-Rabadán et al., 2010).

During the interviews with the mediums, it was not determined whether the tip-of-the-tongue experience that occurred while communicating with a discarnate personality was distinct from the type they would typically experience during a normal conversation. However, it is worth noting that tip-of-the-tongue occurrences often increase in older individuals (Brown & Nix, 1996; Ouyang, Cai & Yhang, 2020; Schmank & James, 2020). Therefore, it is plausible that the middle and older ages of the mediums who took part in this study could have contributed to the occurrences of the tip-of-the-tongue reported.

Alternatively, it has been reported that individuals experience more tip-of-the-tongue events in anxiety-provoking situations, such as being observed and evaluated (Schmank & James, 2020). Unfortunately, this study did not ask the mediums on the anxiety levels they typically feel during a demonstration of mediumship. However, it is plausible that such public demonstrations, which involve being observed by large groups of people, could increase their anxiety levels. Therefore, it is reasonable to suggest that the mediums may also experience stress in such an environment, resulting in a noticeable increase in the occurrence of tip-of-the-tongue episodes. However, exploring this issue was not the focus of this study, and questions relating directly to perceived anxiety levels were not posed. Future research could fruitfully explore such a possible relation by manipulating the perceived stress level and assessing the number of TOTs.

Lastly, the mediums acknowledged that their demonstrations of discarnate communication often contained symbolic associations to memories from their own experiences. The notion that discarnate personalities may sometimes use the medium's memories to help relay information or messages is consistent with previous research (Roxburgh & Roe, 2013).

Further, this study also identified that the mediums interviewed considered discarnate communication involving the medium's memories as an indicator of the medium's experience level and mediumistic development. Suggesting that experienced mediums sought to ensure communication from an alleged discarnate personality should include information beyond the medium's current knowledge and experiences to illustrate that the information presented could only have come from the discarnate personality. However, this would only be achievable if the mediums had substantial experience and heightened mediumistic development. It should be remembered that participating mediums were selected based on their accreditation as mediums and also because they were recognized within the spiritualist community as tutors. Arguably, mediums that can guide others in their mediumistic development need to exhibit a high

degree of experience and mediumistic development. Differentiating between accredited mediums who are recognized tutors and accredited mediums who are not may also have implications for further research with them. If, as proposed by this study, mediums who tutor are considered to have a heightened mediumistic ability, it would suggest future researchers may need to consider whether their participants in medium research have the required level of ability to justify their participation. The importance of ensuring the quality of the medium used in research studies is discussed by Beischel (2007) and has led to the development of an extensive screening protocol for research participants. Based on the findings reported here, we would suggest that identifying whether the participant is a recognized tutor may add to the quality of the medium research used in future studies.

This study has identified that three components of executive functions may be used during a demonstration of mediumistic communication with a discarnate personality. Further, from the analysis of the interviews, it is evident that these components are required to work together to initiate and maintain this communication, suggesting that without these executive functions, such communication would likely be impaired or not attainable.

These findings also raise two related points that future research could fruitfully focus on to help shed light on the mediumistic process. First, given that mediumistic communication may, to some extent, be reliant upon these executive functions, are executive function performance in mediums distinct from that in non-mediums. Second, if mediums show a distinct profile of executive functioning compared to non-mediums, which could suggest that they play a causal role in the process, would cognitive performance training lead to improved cognitive strategies that would result in transfer effects during the alleged communication with discarnate personalities?

Conclusion

Semi-structured interviews were conducted with 19 Spiritualist medium tutors to explore the self-reported cognitive strategies and possible executive function use in demonstrating discarnate communication. These interviews were recorded, transcribed, and analyzed using a reflexive TA approach leading to the generation of three main themes: focusing attention and inhibition, multitasking behavior, and memory-related phenomena; each was suggested to relate to a distinct component of executive function. In some cases, the mediums also adopted techniques to enhance the performance of that component or develop strategies to overcome component weaknesses.

This study contributes to the literature exploring executive function in psi functioning (Honorton, 1974; Stanford, 1993) and extends Roxburgh and Roe's (2013) research that showed mediums acknowledge that discarnate communication often relies on symbolic associations to their memories. However, experienced mediums often strive to develop their mediumship ability so that information is beyond their current knowledge and/or understanding in an effort to provide clearer evidence of the veracity of the communication, as well as being more relevant to the recipient. Further, this study extends the literature on mediumship research by identifying the use of memory-related phenomena and multitasking processes when allegedly communicating with a discarnate personality.

Although the findings from this study show that experienced, well-trained mediums utilize three key aspects of executive functioning, it is appropriate to recognize potential limitations. As discussed, it could be argued that the stringent selection criteria to only accept mediums that hold accreditations with a Spiritualist organization limits the ecological validity of the findings to mediums with accreditations. On balance, this was deemed an acceptable limitation to ensure the study recruited participants recognized within the spiritualist community as genuine mediums with an accepted standard of

mediumistic ability. However, we acknowledge that these predominantly English-speaking mediums may not represent the wider global community of spiritualist mediums with varying levels of mediumship experience and cultural backgrounds. Nevertheless, our findings bolster the limited research on the psychological processes involved in mediumistic communication, represent a step in improving our understanding of the mediumistic process, and raise further questions worth pursuing.

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Appendix A: Semi-Structured Interview Questions

1. How easy is it for you to stop your mind from wandering or becoming distracted from other thoughts when you're demonstrating?
2. Do you find times when you are so focused that you forget where you are or get caught up in the communication forgetting the congregation?
3. Do you sometimes get another communicator interrupt the communication?
4. Have you ever experienced a lapse in memory whilst demonstrating, like something is on the tip of your tongue but can't quite reach it?
5. Within Spiritualism, we're taught that spirit uses our memories. Does your experience of mediumship agree with this idea?... and could you give me some examples of your reasoning.
6. There have naturally been times when the information you've given hasn't been accepted; what is your mental process to correct that?
7. When you have some evidential information – how do you manage to take your awareness to the recipient to give the information? Do you drop the connection with spirit?
8. When you're demonstrating and working on getting evidential information from spirit, how do you manage to be aware of the recipient and the spirit world?
9. Is there a need for you to manage multiple recipients that can accept the communicator – what mental processes do you go through?

Zur Untersuchung der Kognitiven Prozesse, die von Medien Während der Angeblichen Kommunikation mit Verstorbenen Eingesetzt Werden

Chris Connelly

David Vernon

James Cane

Zusammenfassung: *Zielsetzung:* Ziel dieser Studie war es, ein gewisses Verständnis für die Art der selbstberichteten kognitiven Strategien zu erlangen, die am medialen Prozess beteiligt sind. *Methode:* Es wurden halbstrukturierte Interviews mit 19 Tutoren spiritistischer Medien geführt, und der Inhalt wurde mit Hilfe eines reflexiven Ansatzes der Thematischen Analyse (TA) analysiert. *Ergebnisse:* Die Analyse ergab drei Hauptthemen: fokussierte Aufmerksamkeit und Hemmung von Ablenkungen, Multitasking-Verhalten und gedächtnisbezogene Phänomene, die mit Komponenten der exekutiven Funktionen in Verbindung gebracht werden können. *Schlussfolgerung:* Diese Themen deuten darauf hin, dass Medien spezifische kognitive Prozesse verwenden, um eine angebliche Kommunikation mit leibfreien Persönlichkeiten zu initiieren und aufrechtzuerhalten. Die Implikationen dieser Befunde werden diskutiert.

German translation: Eberhard Bauer

Explorando os Processos Cognitivos Utilizados por Médiuns Durante Alegada Comunicação com os Mortos

Chris Connelly

David Vernon

James Cane

Resumo: *Objetivos:* Este estudo almejou buscar alguma compreensão a respeito dos tipos de estratégias cognitivas autorreferidas envolvidas no processo mediúnico. *Método:* Foram realizadas entrevistas semiestruturadas com 19 instrutores médiuns espiritualistas e o conteúdo foi analisado por meio de uma abordagem de Análise Temática Reflexiva (ATR). *Resultados:* A presente análise identificou três temas principais: atenção concentrada e inibição de distrações, comportamentos multitarefa (*multitasking*) e fenômenos relacionados à memória, que poderiam ser associados a

componentes das funções executivas. *Conclusão:* Esses temas sugerem que os médiuns podem usar processos cognitivos específicos para iniciar e manter a suposta comunicação com personalidades desencarnadas. As implicações de tais descobertas são discutidas ao longo do artigo.

Portuguese translation: Antônio Lima

Una Exploración de los Procesos Cognitivos Utilizados por los Médiums Durante la Presunta Comunicación con los Difuntos

Chris Connelly

David Vernon

James Cane

Resumen: *Objetivos:* El objetivo de este estudio fue comprender el tipo de estrategias cognitivas involucradas en el proceso mediúmico. *Método:* Usamos entrevistas semi-estructuradas con 19 médiuns espiritistas tutores y analizamos el contenido con un Análisis Temático (AT) reflexivo. *Resultados:* El análisis identificó tres temas principales: atención focalizada e inhibición de distracciones, comportamientos multitarea, y fenómenos relacionados a la memoria, que pueden estar asociados a componentes de las funciones ejecutivas. *Conclusión:* Estos temas sugieren que los médiuns tal vez utilicen procesos cognitivos específicos para iniciar y mantener una presunta comunicación con personalidades desencarnadas. Discutimos las implicaciones de los resultados.

Spanish translation: Etzel Cardeña

Phenomenology of AI-Generated “Entity Encounter” Narratives¹

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Abstract: *Objective:* We used the ChatGPT-3.5 artificial intelligence (AI)-based language program to compare twelve types of mystical, supernatural, or otherwise anomalous entity encounter narratives constructed from material in the publicly available corpus of information, and compared their details to the phenomenology of spontaneous accounts via the Survey of Strange Events (SSE) and the grounded theory of Haunted People Syndrome (HP-S). *Methods:* Structured content analysis by two independent and masked raters explored whether the composite AI-narratives would: (a) cover each encounter type, (b) map to the SSE’s Rasch hierarchy of anomalous perceptions, (c) show an average SSE score, and (d) reference the five recognition patterns of HP-S. *Results:* We found moderate evidence of a core encounter phenomenon underlying the AI-narratives. Every encounter type was represented by an AI-generated description that readily mapped to the SSE, albeit their contents showed only fair believability and low but generally positive correlations with each other. The narratives also corresponded to below-average SSE scores and referenced at least one HP-S recognition pattern. *Conclusions:* Prototypical depictions of entity encounter experiences based on popular source material certainly approximate, yet not fully match, the phenomenology of their real-life counterparts. We discuss the implications of these outcomes for future studies.

Keywords: AI, content analysis, entity encounters, ghostly episodes, HP-S, narrative construction, phenomenology

Highlights

- ChatGPT can generate prototypical entity encounter narratives with a fair degree of believability.
- AI-generated encounter narratives with diverse outwardly themes often reference similar perceptual contents and contextual variables.
- AI-generated encounter narratives do not fully match the phenomenology of real-life reports as modeled by integrative theory formation using recent psychometric research.

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What is the nature of entity encounters as frequently debated by social and biomedical scientists? The popular artificial intelligence (AI) program called ChatGPT gives a surprisingly balanced and thoughtful answer:

As an AI language model, I cannot provide a definitive answer to the reality of entity encounters since it is a subjective and often controversial topic. However, it is important to note that many people report having experienced encounters with entities, such as ghosts, angels, demons, and extraterrestrial beings.

Some people believe that these encounters are real and provide evidence of the existence of a spiritual or supernatural realm beyond our understanding. Others believe that these encounters are simply products of the human imagination, influenced by cultural beliefs, personal experiences, and psychological factors.

There is no scientific evidence that definitively proves or disproves the existence of entities, and opinions on the matter can vary widely depending on individual beliefs, cultural context, and personal experiences. It is important to approach these topics with an open mind and to seek reliable sources of information and support when dealing with unexplained phenomena (conducted by the authors, March 1, 2023).

Despite the ongoing controversy, qualitative and quantitative research has revealed several key insights about the phenomenology of encounter experiences. Phenomenology is the study of the structures of experience and consciousness (Seamon, 2000), which Laythe et al. (2021, p. 198) described as having “macro” and “micro” aspects. Macro-phenomenology refers to the mediating conditions for the onset or proliferation of particular altered-anomalous experiences, whereas micro-phenomenology involves the

moderation of specific contents or details of the altered-anomalous experiences². These nuances are readily exemplified by paradoxes long noted in haunt-type cases, such as why some people have experiences while others also present do not (i. e., macro-phenomenology, e. g., Cornell, 2002; Roll, 1977) or why multiple witnesses can perceive shared experiences differently (i. e., micro-phenomenology, e. g., Jaki, 1999; McHarg, 1973).

Much evidence suggests that entity encounters typically manifest to people with thin (or permeable) mental boundary functioning, as measured by dissociative tendencies (Ross & Joshi, 1992), psychological absorption (Lifshitz et al., 2019), transliminality (Laythe et al., 2018), or a host of other hypnosis-related attitudes or behaviors (Kumar & Pekala, 2001). We also know that while the general appearance or meaning of entity encounters often varies with the setting in which the experience occurs (Evans, 2001; Houran, 2000), the specific perceptual contents tend to be consistent across experiencers in two aspects. First, episodes often reference psychological or subjective experiences (“S,” e. g., apparitions, sensed presences, hearing voices, and unusual somatic or emotional manifestations) and physical or objective events (“O,” e. g., apparent object movements, malfunctioning electrical or mechanical equipment, and inexplicable percussive sounds like raps or knocks). Second these S/O anomalies collectively form a probabilistic and unidimensional Rasch scale, that is, a literal “haunt hierarchy” involving a series of *mini* entity encounters (Houran et al., 2019a,b).

In other words, there is ostensibly a core encounter phenomenon that presents much like a syndrome. Particularly, Laythe et al.’s (2021, 2022) grounded theory of Haunted People Syndrome (HP-S) contends that spontaneous ghostly or entity encounters recurrently experienced by certain people are an interactionist phenomenon in which psychophysical stress is a catalyst for altered-anomalous experiences that derive from

² We developed our concept of micro-phenomenology independently from Petitmengin et al. (2019), who used the term to describe their interview method for collecting fine-grained descriptions of lived experiences associated with various sensorial, emotional, or cognitive processes so that a corpus of accurate data relevant to a research objective can be gathered. However, both views involve the idea of a “psychological or behavioral microscope” that distinguishes descriptive elements in a narrative from those related to explanations or judgments.

thin mental boundary functioning. Experiencers’ paranormal belief or threat detection processes encourage these perceptions to be interpreted as the actions of purposeful agents. Additional experiences then begin to snowball because of attentional- or confirmation- biases. Succinctly put, HP-S represents somatic-sensory sensitivities stirred by dis-ease states, contextualized within paranormal belief, and reinforced with threat-agency detection and perceptual contagion. Table 1 outlines these components via a checklist of five general recognition patterns.

Table 1

Checklist for Recognition Patterns of Haunted People Syndrome (HP-S)

HP-S Recognition Pattern	Corresponding Attitudes or Behaviors
Transliminality (i.e., permeable mental boundaries) is the foundation for percipients’ anomalous experiences, reinforced by Paranormal Belief.	<ol style="list-style-type: none"> 1. Does the witness/ focus person report experiences consistent with items from the Revised Transliminality Scale? 2. Does the witness/ focus person report attitudes or beliefs consistent with items from the Rasch-Revised Paranormal Belief Scale?
“Dis-ease” (or psychological dissonance) as a catalyst for the onset of anomalous experiences.	<ol style="list-style-type: none"> 3. Does the witness/ focus person report circumstances of notable distress (negative stress) or eustress (positive stress) immediately prior to the onset of the anomalous experiences? <p>This includes personality traits or individual differences linked to ‘dis-ease,’ such as Imagination/ Magical Thinking/ Fantasy-Proneness, Rebellious Attitude/ Impulsivity/ Aggression/ Hostility, Somatic Complaints/ Anxiety/ Irritability, Low Self-Esteem/ Self-Concept or Ego-weakness/ Insecurity, Unhappiness/ Shame/ Jealousy, Dissociative Tendencies/ Temporal Lobe Lability, and Introversion.</p>
Recurrent anomalous experiences that exhibit temporal patterns suggestive of perceptual or social contagion.	<ol style="list-style-type: none"> 4. Does the witness/ focus person report an ongoing array of diverse S/O anomalies per the Survey of Strange Events? 5. Does the perception of S/O anomalies clearly occur in “flurries,” especially when a group of percipients is involved?
Attributions for the anomalous experiences align to the percipient’s biopsychosocial context.	<ol style="list-style-type: none"> 6. Does the witness/ focus person interpret the S/O anomalies in a way that is consistent with his/her religious or cultural belief system(s)?
Anxiety levels of the percipients relate to the nature, proximity, and spontaneity of the anomalous experiences.	<ol style="list-style-type: none"> 7. Does the witness/ focus person report greater intensity of fear or anxiety when the S/O anomalies occur (a) suddenly or without warning, (b) within the person’s personal space, and/or (c) involve more tangible or physical anomalies?

The Present Study

One way to examine the idea of a core encounter phenomenon that can change in appearance is to search “mainstream consciousness” (i. e., the general public’s awareness of certain ideas and topics) for prototypical (or archetypal-like³) first-person narratives involving distinct types of presumably real entities and then assess whether they exhibit markedly similar themes, structures, and correlates as gauged by the Survey of Strange Events (SSE: Houran et al., 2019b) and the HP-S model. OpenAI’s advent of the AI-based language program “ChatGPT” (or Generative Pre-trained Transformer 3) offers an efficient and topical way to potentially mine such data. There are two versions of this extremely advanced chatbot: (a) the default GPT-3.5 is less powerful but open access, whereas (b) the superior GPT-4 is only available via paid subscription and limited use.

Guinness (2023) explained that ChatGPT works by attempting to understand prompts and then spitting out strings of words that it predicts will best address the question or task based on the training data. The program was originally trained on roughly 500 billion “tokens” that allow its language models to assign meaning and predict plausible follow-on text more easily. Many words map to single tokens, though longer or more complex words often break down into multiple tokens. On average, tokens are roughly four characters long. All the tokens come from a massive corpus of data written by people, including books, articles, and other documents across all different topics, styles, and genres, as well as an enormous amount of content scraped from the open internet. This humongous dataset was used to form a deep learning neural network—a complex, many-layered, weighted algorithm modeled after the human brain—that allows ChatGPT to learn patterns and relations in the text data and tap into the ability to create

³ Cullum et al. (2017) argued that: “Archetypes can be framed as abstract exemplars of classes, conceptual models linking form and process and/or tacit mental models” (p. 95). Archetype relates here to behavior, historical psychology, and literary analysis, and more specifically a statement, pattern of behavior, prototype, “first” form, or a main model that other statements, patterns of behavior, and objects copy, emulate, or “merge” into. Informal synonyms frequently used for this definition include “standard example,” “basic example,” and “archetypal example,” mathematical archetypes often appear as “canonical examples.” This contrasts with the Jungian psychology definition of a collectively inherited unconscious idea, pattern of thought, image, etc., universally present in individual psyches.

human-like responses by predicting what text should come next in any given sentence. The program does not work at a sentence level; instead, it generates text of what words, sentences, and even paragraphs or stanzas could follow. To further refine ChatGPT’s ability to respond to a variety of different prompts, it was optimized for dialogue with a technique called reinforcement learning with human feedback. Essentially, individual users created a reward model with comparison data (where two or more model responses were ranked by AI trainers), so the AI could learn which was the best response.

Based on the above, this language program should aptly fulfil a request to “Tell a convincing real-life ghost story.” ChatGPT indeed stated in a text session that, “I can attempt to create a story based on the common themes and details that have been reported in such encounters.” It might be expected therefore that the macro- and micro-phenomenology of these AI-narratives will parallel the known features and dynamics of “real-life” paranormal encounters as documented per Laythe et al.’s (2021, 2022) HP-S model. Accordingly, we used ChatGPT-3.5 to test four hypotheses:

1. AI-narratives will be generated from believable material in mainstream consciousness.
2. AI-narratives will readily and similarly map to the Survey of Strange Events.
3. AI-narratives will correspond to an average score on the Survey of Strange Events.
4. AI-narratives will reference the five recognition patterns of Haunted People Syndrome.

Method

AI-Narratives

Our selection of entity encounters was derived primarily from Evans’s (1986, 1987, 2001) comparative literature research, and secondarily from quantitative studies of reported experiences (Houran, 2000; Houran et al., 2019b; Kumar & Pekala, 2001). Table 2 summarizes twelve (12) types of entity encounters considered here, including two narratives that arguably represent “hidden or disguised” encounter experiences, e. g., gang-(or group) stalking (e. g., Lange et al., 2020) and autonomous or “deep” imaginary companions (e. g., Little et al., 2021). We generated our sample of AI-narratives via a

multi-stepped process whereby ChatGPT-3.5 was asked to “Write a convincing account of a real-life [insert name of entity encounter type here].” This was repeated for all twelve encounter types. Note that we did not experiment with alternative versions of this instruction set (e. g., “Write a convincing account of [...] as usually reported in the media”). As a convenient cross-check, we also generated three comparison (or control) AI-narratives to examine ChatGPT-3.5’s capacity for detailed story-telling as measured by the word count of the outputs. We settled on three realistic scenarios that likely involved intense perceptions framed by the elements of surprise or drama, requesting the language program to produce “convincing real-life accounts of: (a) witnessing a car accident, (b) having a COVID-19 infection, and (c) seeing the Aurora Borealis for the first

Table 2

Background Descriptions of the Entity Encounter Narratives

Entity Encounter Type	Definition	Sample Reference
Ghost Story	Any account or narrative that includes a ghost, the possibility of ghosts, or people who believe in them.	Goldstein et al. (2007)
Haunted House	A built structure or other localized setting believed to be inhabited by spirits who may have been former residents or were otherwise connected to the property.	Dagnall et al. (2020)
Poltergeist Outbreak	Mysterious noises, physical events, and other spooky occurrences that seem to manifest around a certain person, who either has psychic powers or is being targeted by a disembodied entity.	Roll (1977)
Ghost Sighting	An apparition of a dead person that is believed to appear or become manifest to the living, typically as a nebulous image.	Maher (1999)
Alien Abduction	The experience of being kidnapped by an unusual figure subjected to physical or psychological experimentation.	Mack (1994)
Angel Visitation	Spiritual beings—in mystical or human form—who guide or carry out God’s tasks.	Lange & Houran (1996)
Demonic Possession	The state of a person whose body has fallen under the control of the devil or a demon.	Perrotta (2019)
Fairy Sighting	A folklore being usually having diminutive human form and magic powers.	Young (2018)
Men-in-Black	Anonymous dark-clothed men who supposedly visit people who have sighted UFOs or aliens to prevent their publicizing it.	Randles (1997)
Tulpa	A “thought-form” that magically or psychically comes to life and has autonomy.	Parker (2021)
“Deep” Imaginary Companion (hidden entity encounter)	Pretend or invisible friends that reportedly have a personality and will of their own.	Little et al. (2021)
Gang-Stalking (hidden entity encounter)	Victims who state that they are being mysteriously targeted by coordinated groups of people.	Sheridan et al. (2020)

time.” The Appendices give sample AI-narratives for an encounter experience (Appendix A: “ghost sighting”) and a control scenario (Appendix B: “Aurora Borealis sighting”). We used the control narratives only for a general statistical comparison with the encounter narratives, so the raters neither saw nor considered them in their analyses. The full set of AI-narratives used in this study is freely available to interested readers at the Psi Open Data repository: <https://open-data.spr.ac.uk/dataset/chatgpt-generated-entity-encounter-narratives>.

Raters

Content analysis of the AI-narratives was conducted by two individuals of different backgrounds but with prior experience using our coding materials: (a) one individual is a Ph. D. level parapsychologist, and (b) the other was a college student and occult practitioner who actively supports citizen science efforts in anomalistics.

Coding Materials

The *Survey of Strange Events* (SSE; Houran et al., 2019a,b, 2021) is a 32-item, true/false Rasch (1960/1980) scaled measure of the overall perceptual intensity (or depth) of a ghostly account or narrative via a checklist of anomalous experiences inherent to these episodes (Table 5 lists all the items). The SSE’s Rasch item hierarchy represents the probabilistic ordering of S/O events according to their endorsement rates but rescaled into a metric called “logits.” Higher logit values denote items with higher positions (or greater difficulty) on the Rasch scale (Bond & Fox, 2015). SSE item endorsements sum to raw scores that are converted to Rasch scaled scores—ranging from 22.3 (= raw score of 0) to 90.9 (= raw score of 32), with a mean of 50 and $SD = 10$. The Rasch reliability = 0.87, and higher scores correspond to a greater number and perceptual intensity of anomalies that define a percipient’s cumulative experience of a ghostly episode, which comprises an array of different entity encounters. Supporting the SSE’s construct and predictive validities, Houran et al. (2019b) found that the phenomenology of “spontaneous”

accounts (i. e., self-reported as sincere and unprimed) differed significantly from control narratives from “primed conditions, fantasy scenarios, or deliberate fabrication.” That is, spontaneous ghostly episodes have a specific sequence (or Rasch model) of S/O anomalies that is distinct from the details of narratives associated with other contexts.

The *HP-S Recognition Patterns Checklist* (Houran et al., 2023). was used to guide the raters’ content analyses of the contextual aspects of the various encounter narratives. It outlines the five recognition patterns of HP-S via seven specific questions that are rated on four-point Likert scales anchored by “Strongly Disagree” (scored “0”) to “Strongly Agree” (scored “3”). Raw ordinal scores range from 0 to 21, with higher scores indicating a greater likelihood of the respective HP-S recognition patterns being present. Table 1 shows the basic checklist, which references the *Revised Transliminality Scale* (RTS: Lange, Thalbourne et al., 2000) and the Rasch version (Lange, Irwin, & Houran, 2000) of Tobacyk’s (1988, 2004) *Revised Paranormal Belief Scale* to help users recognize attitudes or behaviors indicative of thin boundary functioning.

The RTS is a 17-item, T/F, Rasch scaled instrument to gauge the tendency for ideation, affect, imagery and perception to cross (*trans*) thresholds (*limines*) into or out of consciousness as indexed by experiences like hyperesthesia, fantasy proneness, absorption, mystical experiences, magical thinking, and others.

In contrast, the Rasch-RPBS is a 26-item, Likert based measure with two subscales hypothesized to reflect different control issues: (a) “New Age Philosophy” related to a greater sense of control over interpersonal and external events (e. g., belief in psi) and (b) “Traditional Paranormal Beliefs” about more culturally-transmitted beliefs about magic, determinism, and a mechanistic view of the world.

We provided copies of these two instruments to the coders as critical supplementary information. The Recognition Pattern Checklist is primarily a worksheet rather than a formal assessment, so no psychometric properties are reported here.

Perceived Authenticity. Each narrative was followed by a one-item global rating of its face validity scored by each rater on a four-point Likert scale: “This narrative sounds realistic to me: Strongly Disagree (0), Disagree (1), Agree (2), Strongly Agree (3).”

Procedure

Following Houran et al.’s (2023) procedure in a similar study, we gave the coders copies of the: (a) twelve AI-narratives in a randomized order, (b) SSE measure, (c) HP-S Recognition Patterns Checklist, and (d) the global rating of Perceived Authenticity. Each coder was masked to our hypotheses and the source of the narratives. They worked independently for three days to code the phenomenology of these accounts by documenting the presence of specific S/O anomalies via SSE ratings, as well as any contextual variables presumably associated with the onset or report of those anomalies via the HP-S Recognition Patterns Checklist (supported by the two belief-boundary measures noted earlier). Accordingly, each rater returned two completed forms (cf. Tables 1 and 5).

Analysis

We primarily tested our hypotheses using planned correlational analyses, with $p < .05$, two-tailed, as the criterion for significance.

Results

Inter-Rater Reliability

There is debate over which tests best evaluate the interrater reliability of ordinal or categorical data (O’Neill, 2017), albeit some authorities argue that various statistics typically lead to the same general conclusion (de Raadt et al., 2021). We decided to use Cohen’s kappa (κ) for the coders’ binary SSE item endorsements, and Spearman’s rho (r_s) for the Likert categories on the HP-S Recognition Patterns Checklist. Table 3 shows a

moderately strong level of agreement between the raters on most of the presented details across the twelve narratives in terms of their macro- and micro- phenomenology. More generally, this outcome supports the capability of citizen scientists for some types of parapsychological research (cf. Houran et al., 2022; Appendix).

Table 3

Coders' Averaged Ratings on Contextual and Macro-Phenomenology Variables Across the AI-Generated Narratives

Entity Encounter Narrative	Word Count (n)	Perceived Authenticity (0-3)	SSE: Interrater Reliability (κ)	HP-S: Interrater Reliability (r _s)	SSE Score (22.3-90.9)	HP-S 1a (0-3)	HP-S 1b (0-3)	HP-S 2 (0-3)	HP-S 3a (0-3)	HP-S 3b (0-3)	HP-S 4 (0-3)	HP-S 5 (0-3)
Ghost Story	371	.50	.61**	.17	42.7	2.0	1.0	2.5	2.5	2.0	2.0	2.0
Poltergeist outbreak	367	1.50	.76**	.17	42.7	2.0	2.5	2.5	2.5	2.5	2.5	2.0
Haunted House	369	2.0	.83**	-.44	47.3	2.0	2.0	1.5	2.5	2.0	2.0	2.5
Ghost Sighting	305	2.0	.72**	.76*	40.7	1.5	1.0	2.5	2.0	1.0	2.0	2.5
Men-in-Black	330	2.0	.29	.75*	45.9	1.5	1.5	2.0	2.5	1.5	2.5	2.5
Angel	285	1.0	.24	.67	40.7	2.5	2.0	1.5	2.0	1.0	2.5	1.0
Fairy	336	1.0	.59**	1.0	44.4	3.0	2.0	2.0	2.0	1.0	3.0	1.0
Demonic possession	314	2.0	.59**	.82*	44.4	3.0	3.0	3.0	2.0	1.0	3.0	2.5
Alien abduction	365	2.0	.20	.35	45.9	2.0	2.0	2.5	2.0	1.5	2.5	2.0
Tulpa	363	2.0	.64**	.76*	45.9	3.0	3.0	2.5	3.0	1.5	3.0	3.0
Gang-stalking	351	2.0	.61**	.73	42.7	2.0	1.5	2.5	2.5	1.5	2.5	2.5
Imaginary Friend	365	2.0	.68**	.68	44.4	3.0	3.0	2.0	2.5	1.5	3.0	2.5
Collective Average	343	1.7	.56	.10	43.98	2.3	2.0	2.3	2.4	1.5	2.5	2.2

Note: SSE : Survey of Strange Events, HP-S = Haunted People Syndrome, HP-S 1a = Transliminality, HP-S 2 = Disease State, HP-S 3a = Diverse Array of S/O Anomalies, HP-S 3b = Perceptual Flurries Suggestive of Contagion, HP-S 4 = Interpretations Consistent with Context, HP-S 5 = Threat-Agency Detection

That said, the interrater reliability of the SSE and HP-S Recognition Patterns Checklist ratings was not even across the AI-narratives. The stories about the Men-in-Black, Angelic Encounter, and Alien Abduction showed the lowest reliability on SSE ratings, in part because of discrepancies related to perceptions of non-descript visual images and recognizable sounds of mysterious origin. On the other hand, the narratives about the Haunted House, Ghost Story, and Poltergeist Outbreak had the lowest reliability on the HP-S Recognition Patterns Checklist ratings, mostly because of discrepancies over clear indications of: (a) dis-ease states at the time of the fictional percipients' anomalous experiences, and (b) perceptual flurries characteristic of contagion effects.

Hypothesis 1: AI-Narratives Will Be Generated from Believable Material in the Mainstream Consciousness

Note that ChatGPT's claim that it can "...create a story based on the common themes and details that have been reported in such encounters" implies a sufficiently rich supply of accessible source material within its training set with which to generate a composite (or archetypal-like) narrative. As hypothesized, Table 2 shows that the language program indeed generated a composite account for each of the twelve specified encounter experiences. The average word count for these narratives ($M = 343.40$, $SD = 29.10$) compared favorably to our three control AI-narratives ($M = 279.33$, $SD = 19.90$). However, the average rating of Perceived Authenticity ($M = 1.70$, $SD = .75$) indicated that the encounter narratives only reached a somewhat "fair level of believability." Closer inspection revealed that eight narratives about specific entities (e. g., tulpa encounter) were rated as most believable to the coders, whereas the more generic accounts (e. g., ghost story) were deemed the least authentic.

Table 4

Spearman Rank-Order Correlations Between the AI-Narrative's HP-S Characteristics

Entity Encounter Narrative	Word Count (n)	Perceived Authenticity (0-3)	SSE: Interrater Reliability (κ)	HP-S: Interrater Reliability (r _s)	SSE Score (22.3-90.9)	HP-S 1a (0-3)	HP-S 1b (0-3)	HP-S 2 (0-3)	HP-S 3a (0-3)	HP-S 3b (0-3)	HP-S 4 (0-3)	HP-S 5 (0-3)
Ghost Story	371	.50	.61**	.17	42.7	2.0	1.0	2.5	2.5	2.0	2.0	2.0
Poltergeist outbreak	367	1.50	.76**	.17	42.7	2.0	2.5	2.5	2.5	2.5	2.5	2.0
Haunted House	369	2.0	.83**	-.44	47.3	2.0	2.0	1.5	2.5	2.0	2.0	2.5
Ghost Sighting	305	2.0	.72**	.76*	40.7	1.5	1.0	2.5	2.0	1.0	2.0	2.5
Men-in-Black	330	2.0	.29	.75*	45.9	1.5	1.5	2.0	2.5	1.5	2.5	2.5
Angel	285	1.0	.24	.67	40.7	2.5	2.0	1.5	2.0	1.0	2.5	1.0
Fairy	336	1.0	.59**	1.0	44.4	3.0	2.0	2.0	2.0	1.0	3.0	1.0
Demonic possession	314	2.0	.59**	.82*	44.4	3.0	3.0	3.0	2.0	1.0	3.0	2.5
Alien abduction	365	2.0	.20	.35	45.9	2.0	2.0	2.5	2.0	1.5	2.5	2.0
Tulpa	363	2.0	.64**	.76*	45.9	3.0	3.0	2.5	3.0	1.5	3.0	3.0
Gang-stalking	351	2.0	.61**	.73	42.7	2.0	1.5	2.5	2.5	1.5	2.5	2.5
Imaginary Friend	365	2.0	.68**	.68	44.4	3.0	3.0	2.0	2.5	1.5	3.0	2.5
Collective Average	343	1.7	.56	.10	43.98	2.3	2.0	2.3	2.4	1.5	2.5	2.2

* = $p < .01$

Table 4 clarifies that Perceived Authenticity was not associated with a higher Word Count ($r_s = -.13$, $p = .80$) but instead with references to Threat-Agency Detection (HP-S

Recognition Pattern #5) ($r_s = .81, p < .01$) and Paranormal Belief (HP-S Recognition Pattern #1) ($r_s = .23, p = .19$), as well as the SSE scaled score (or index of perceptual intensity) for the narrative ($r_s = .49, p = .08$). That is, the experiential context and contents of the narratives influenced their overall believability more so than the sheer length of the stories.

Hypothesis 2: AI-Narratives Will Similarly Map to the SSE Measure

The raters reported no problems mapping the S/O descriptions in the AI-narratives to the SSE's 32 items, and Table 5 shows the frequency distribution of these item endorsements. We see that 27 (84%) of the 32 S/O anomalies were present in one or more of the narratives, whereas the remaining five (16%) were never mentioned. Additionally, five of the 27 listed anomalies specifically featured in most of the stories (i. e., "onset of negative feelings, sensed presences, physical perturbations, sense of communication with an outside force, and discernible voices or noises"). It is very curious that the frequency distribution of specific SSE items showed a suggestive correlation ($r = -.32, p = .07$) with their logit values. In particular, this result generally aligns to Houran et al.'s (2019b) benchmark data in that S/O anomalies endorsed more often by experiencers occupy lower statistical positions in the Rasch hierarchy (i. e., have lower logit values indicating they are "easier" or more likely to endorse).

As expected, Table 6 further indicates that there was substantial consistency in the specific SSE mappings across the various encounter experiences. In fact, 79% of the AI-narratives showed positive (albeit small to moderate sized) correlations between the average of the two coders' discrete ratings across all 32 items on the SSE—with the strongest correspondence curiously between Men-in-Back encounters and Alien Abductions ($r = .64, p < .05$). However, 11 instances (17 %) showed essentially null correlations, and three correlations were inverse (but small in magnitude). On this latter

point, the greatest disparities in SSE mappings were between encounters involving Angels vs Poltergeists, Angels vs. Gang-Stalking, and Fairy Sighting vs. Haunted House.

Table 5

Frequency Distribution of Perceptual Contents (Micro-Phenomenology) Across the AI-Narratives

Survey of Strange Events	Logit Value per Benchmark Data (Houran et al., 2019b)	% of AI-Accounts Referencing the Item
I had a <i>negative</i> feeling for no obvious reason, like anger, sadness, panic, or danger	-.60	92
I felt odd sensations in my body, such as dizziness, tingling, electrical shock, or nausea (sick in my stomach)	-.47	67
I communicated with the dead or other outside force	.03	67
I heard mysterious sounds that could be recognized or identified, such as ghostly voices or music (with or without singing)	-.62	58
I had the mysterious feeling of being watched, or in the presence of an invisible being or force	-1.59	58
I saw with my naked eye a non-descript visual image, like fog, shadow, or unusual light	-.62	42
I saw with my naked eye an "un-obvious" ghost or apparition – a human form that looked like a living person	-.47	33
I saw beings of divine or evil origin, such as angels or demons	1.07	33
I saw folklore-type beings that were not human, such as elves, fairies, or other types of "little people"	1.61	33
I saw objects flying or floating in midair	.65	33
I saw with my naked eye an "obvious" ghost or apparition – a misty or translucent image with a human form	-.51	25
I felt guided, controlled, or possessed by an outside force	.84	25
I felt a mysterious area of cold	-.80	25
I saw objects moving on their own across a surface or falling	.05	25
I heard mysterious "mechanical" or non-descript noises, such as tapping, knocking, rattling, banging, crashing, footsteps or the sound of opening/closing doors or drawers	-1.17	25
I heard on an audio-recorder mysterious sounds that could be recognized or identified, such as ghostly voices or music (with or without singing)	.24	17
I had a positive feeling for no obvious reason, like happiness, love, joy, or peace	.10	17
Electrical or mechanical appliances or equipment functioned improperly or not at all, including flickering lights, power surges or batteries "going dead" in electronic devices (e.g., camera, phone, etc.)	-.62	17
I saw objects breaking (or discovered them broken), like shattered or cracked glass, mirrors, or housewares	.51	17
I had a sense of déjà vu, like something was strangely familiar to me about my thoughts, feelings, or surroundings	-1.65	8
I felt a mysterious area of heat	.72	8
I experienced objects disappear or reappear around me	-.10	8
I felt a breeze or a rush of wind or air, like something invisible was moving near me	-.73	8
I was mysteriously touched in a non-threatening manner, like a tap, touch, or light pressure on my body	-.55	8
I was mysteriously touched in a threatening manner, such as a cut, bite, scratch, shove, burn or strong pressure on my body	.44	8
I smelled a mysterious odor that was pleasant	.03	0
I smelled a mysterious odor that was unpleasant	.42	0
I heard on an audio recorder mysterious "mechanical" or non-descript noises, such as tapping, knocking, rattling, banging, crashing, footsteps or the sound of opening/closing doors or drawers	.16	0
I had a mysterious taste in my mouth	1.08	0
Pictures from my camera or mobile device captured unusual images, shapes, distortions, or effects	-.05	0
Plumbing equipment or systems (faucets, disposal, toilet) functioned improperly or not at all	.90	0
Fires have started mysteriously	1.71	0

Table 6

Correlations Between Coders' Averaged SSE Item-Level Ratings of the AI-Narratives

	1	2	3	4	5	6	7	8	9	10	11	12
1. Ghost Story	--	.01	.39*	.14	.16	.11	.12	.26	-.07	.34	.12	-.01
2. Poltergeist outbreak		--	.17	.11	.25	-.11	.21	.15	.18	.04	.23	.44*
3. Haunted House			--	.25	.17	.12	-.11	.38*	.00	.40*	.09	.47*
4. Ghost Sighting				--	.35*	.03	.07	.37*	.35*	.31	.31	.54*
5. Men-in-Black					--	-.01	.46*	.39*	.64*	.50*	.39*	.15
6. Angel						--	.50*	.31	.09	.34*	-.20	-.04
7. Fairy							--	.29	.39*	.35*	.05	.06
8. Demonic possession								--	.26	.59*	.19	.38*
9. Alien abduction									--	.37*	.23	.15
10. Tulpa										--	.27	.13
11. Gang-stalking											--	.21
12. Spooky Imaginary Friend												--

* $p < .05$, two-tailed ($df = 30$).

Hypothesis 3: AI-Narratives (as Putative Cultural-Level Composites) Will Show Average SSE Scores

This hypothesis was not supported. The 12 narratives had an average raw SSE score of 6, which corresponds to a Rasch scaled SSE score of 44.40 (the actual mean SSE score across the sample was 43.98). Either metric represents a below-average level of perceptual intensity for a ghostly episode per published norms (Houran et al., 2019b). In fact, the AI-narratives most closely approximated the SSE mean score for Illicit accounts ($M = 45.90$), that is deliberately fabricated stories. But we should note that the SSE scores for the narratives were clearly associated with their Word Count ($r = .55, p = .06$) and Perceived Authenticity ($r = .43, p = .14$). Taken altogether, these results suggest that the cultural depiction of an “average” entity encounter is substandard to the scientific depiction of an “average” real-life experience.

Hypothesis 4: AI-Narratives Will Reference the Five Recognition Patterns of HP-S

Contextual variables were often present in an apparent attempt to set a suitable mood and tone for the stories, such as allusions to embedded cues, metaphorical-symbolic references, or demand characteristics (for a review and discussion, see Houran,

2000). But beyond these literary devices, the raters found generally consistent indications of the five recognition patterns of HP-S. across the set of narratives. We underscore two important caveats to this finding. First, no AI-narratives were judged to contain all five recognition patterns. Second, Table 3 reveals that references to “perceptual contagion” effects—flurries or clusters of anomalous perceptions—were more tenuous. Notwithstanding these outcomes, Table 4 does indicate that nearly all the HP-S recognition patterns were positively and moderately correlated with SSE scores, though these associations did not reach significance probably because of sample size. That is, entity encounters of greater perceptual intensity tended to reference more recognition patterns of HP-S. The only exception was the variable of “dis-ease,” which showed a small but negative correlation ($r_s = -.17, p = .56$) with SSE scores.

Post-Hoc Analyses

Although not part of our formal hypotheses, a cursory inspection of the AI-narratives hinted unexpectedly at certain other context effects that researchers of entity encounters have only recently begun to fully recognize and appreciate. We therefore took an informal inventory of these references via an iterative discussion between the co-authors to understand their prevalence. The authors conducted this ancillary exercise after the masked raters completed the main coding work.

Table 7

Tangential Context Effects in the AI-Narratives

Encounter Type	Discrete References to Environmental Variables	Discrete References to Enchantment
Ghost Story	3	0
Haunted House	1	0
Poltergeist Outbreak	0	0
Ghost Sighting	1	1
Alien Abduction	1	1
Angel Encounter	0	1
Demonic Possession	1	0
Fairy Sighting	1	1
Men-in-Black	0	1
Tulpa	0	0
Spooky Imaginary Friend	0	0
Gang-Stalking	0	0

Environmental Effects

Conceptual and empirical studies suggest that: (a) physical factors in the local environment (electromagnetic fields, air quality, humidity, infrasound, lighting levels, and embedded cues; Dagnall et al., 2020), and (b) Gestalt features of the experiential setting (affordance, immersion, presence, ambiguity, legibility, and memory-associations; Jawer et al., 2020) can individually or collectively influence the phenomenology of some entity encounters. Consistent with this idea, 50% of the AI-narratives referenced at least one pertinent environmental variable.

State of Enchantment

The transpersonal or clinical aftereffects of altered-anomalous experiences is a burgeoning area of study (Brett et al., 2014; Rabeyron, 2022; Roxburgh & Evenden, 2016). One frequently reported consequence of entity encounters is a sense of situational-enchantment (Houran, Lange, & Laythe, 2022). This denotes a complex arousal state involving absorption within a melee of pleasant ideations and emotions (e. g., excitement, surprise, awe, and wonder), simultaneously mixed with more unpleasant ideations and emotions (e. g., uneasiness, disorientation, tension, and unpredictability). This happens when an individual's normal waking experience is disrupted by a sudden, unexpected, or profound awareness that seeds a transformative feeling of connection to a transcendent agency or ultimate reality (Drinkwater, Massullo, et al., 2022).

Moreover, evidence suggests that enchantment is a mental state that itself facilitates additional anomalous or exceptional human experiences (Lange & Houran, 2021). It is thus interesting that 42% of the AI-narratives referenced thoughts or feelings that imply the fictional witnesses experienced some degree of enchantment in response to their encounters. For the sake of completeness, we should point out that there was virtually no association ($r = -.06, p = .85$) between indications of Environmental Variables

and Enchantment. This result might reinforce the interpretation that the depicted percipients were primarily reacting to the profound nature of their experiences rather than strictly the environmental cues.

Discussion

Four general conclusions emerge from our exploratory exercise: (a) ChatGPT-3.5 was able to construct archetypal-like entity encounter narratives with a fair level of believability from information apparently in the mainstream consciousness; (b) narratives involving different types of entities mapped well to the same unidimensional and probabilistic hierarchy of S/O anomalies underlying the Survey of Strange Events; (c) the pattern of item endorsement on the SSE was often consistent across the narratives; and (d) the contextual details of the different narratives often alluded to one or more of the five recognition patterns of HP-S, although perceptual contagion was questionable, and the raters did not agree that all five signs-symptoms were present within any single narrative. In the spirit of exploration to avoid Type II errors, we purposely did not apply controls for multiple observations (e. g., setting low alphas, using Bonferroni corrections, or conducting a split-sample analysis). Yet we are encouraged by the degree to which our hypotheses were ostensibly affirmed using two-tailed statistical testing of rather rudimentary data.

This study thus cautiously supports the utility and content validity of the SSE, and lends some credence to the growing qualitative and quantitative evidence of a core encounter phenomenon that can be modeled as a biomedical syndrome per the HP-S framework (Houran et al., 2019b; 2022, 2023; Laythe et al., 2021, 2022). Houran et al. (2019 a,b) specifically found evidence that the S/O anomalies reported during such encounters are predictably structured across experiencers, albeit this core narrative's "theme" (Evans, 1987; Houran, 2000; Hufford, 1982) or "meaning" (Drinkwater et al., 2013; Dyne, 2010; Puhle, 2001) alters per the situational or sociocultural context in which the S/O anomalies



manifest. This suggests that encounter experiences are partly narrative constructions that are actively shaped by both attitudinal and normative influences (e. g., Childs & Murray, 2010; Drinkwater et al., 2019; Eaton, 2019; Hill et al., 2018; Ironside & Wooffitt, 2022). In this sense, our present results and previous research alike (Laythe et al., 2021) clearly support ChatGPT's perspective on the ontological reality of the altered-anomalous experiences that we cited in the Introduction.

Nonetheless, some readers might regard ChatGPT as a controversial tool to investigate the phenomenology of entity encounters. This criticism certainly has merit, as unlike the insights or results from well-defined systematic literature reviews or meta-analyses (Appelbaum et al., 2018), the appropriateness, veracity, or representativeness of the source material used to generate the AI-accounts is ultimately unclear (e. g., media reports, novels, films, scientific journals, or a combination of all). A reliance on purely media (Edwards, 2005), folklore (Goldstein, 2017), or cultural (Waskul & Eaton, 2018) studies are other ways to gather prototypical narratives, but the corresponding data on S/O events or the contextual variables associated with them would likely be sensationalized rather than realistically portrayed (for discussions, see Hill et al., 2018, 2019). Illustratively, Steven Spielberg's 1982 blockbuster movie *Poltergeist* depicted "paranormal portals" and "possessed trees attacking people"—neither of which correspond to sincerely reported spontaneous cases. Many authorities likewise caution that professional-grade informational content must be trustworthy, that is relevant, accurate, current, and credible (Pattanaphanchai et al., 2013). New research using computerized linguistic analysis might also help to assess the degree of structural and semantic similarity among the different AI-narratives, as well as subsequent comparisons with collections of vetted spontaneous cases. This basic approach has been applied to studies of other anomalous experiences (e. g., Lange et al., 2015; Martial et al., 2019), so it might be equally fruitful here.

Future research could also address several limitations of the present study. First, we used single examples derived from ChatGPT-3.5, so it is unclear how well our results generalize to outputs from the more advanced ChatGPT-4. Second, different ChatGPT wordings or instructions could skew the narrative content. Houran et al. (2019b) showed that the micro-phenomenology of encounter narratives can subtly but significantly shift when percipients' make reports under different contexts. Third, the types of entity encounters considered here were representative but certainly not exhaustive. And fourth, our coding system could have been possibly more controlled or robust. Better approaches could either be to use raters recruited from outside of anomalistics, or the evaluations of a cross-disciplinary panel (Bertens et al., 2013). This might help mitigate the lower inter-rater reliabilities we had with certain macro- and micro- phenomenology variables that seem to be more complex or nuanced. For all these reasons and more, we deem our approach and findings as preliminary. At the same time, the present results are merely one piece of a broader mosaic of ostensibly converging evidence for the interactionist—and perhaps performative (Drinkwater, Dagnall et al., 2022)—nature of entity encounters.

Moreover, the below-average SSE scores and only fair believability of the AI-narratives have important implications for future studies. Despite the intense public interest in the topic and its plethora of associated media, the present findings suggest that what mainstream consciousness "knows" about "real-life entity encounters" is quite limited. Specifically, ChatGPT seemingly had little to no access to (or an understanding of) the spontaneous case reports or survey research in academic literature. Thus, its composite (archetypal-like) narratives derived from a restricted range of source material that only represent a cultural understanding of these experiences versus a more rounded, scientific one. Fraudulent or fabricated accounts should thus be more easily or confidently identified by informed researchers, as mainstream consciousness has not fully caught up with the results of scientific studies.

We certainly hope that our results motivate more thorough investigations. Indeed, AI-generated narratives offer a new way to study induced “esoteric ideations” or anomalous experiences, as their private nature makes them difficult to study from a behavioral perspective. Time will tell whether computer simulations—as routinely used in many studies of the dynamic behavior of objects or systems in response to conditions that cannot be easily or safely applied in reality (Winsberg, 2022)—will meaningfully augment the more traditional methods used to study entity encounters and related experiences, including surveys (Davis et al., 2020), case studies (Houran & Laythe, 2022), and immersive experiences like paranormal tourism (Langston & Hubbard, 2019), mirror-gazing exercises (Caputo et al., 2021), or hypnosis sessions (Connors, 2015). Still, we envision tremendous opportunities for creative research designs that refine or extend our basic approach. In this way, we can conceivably explore issues of paranormal belief formation or maintenance, as well as the content or meaning of entity encounters and other altered-anomalous experiences from different narrator viewpoints. Some obvious but interesting angles here include the juxtapositions of skeptic vs believer, solitary vs collective perceptions, indoor vs outdoor settings, and scenarios involving different forms of belief conversion.

To be sure, research suggests that paranormal entity narratives—as personal beliefs, shared stories, or putative experiences—can be powerfully engrossing and shareable experiences due in part to their inherent Versatility, Adaptability, Participatory Nature, Universality, and Scalability (the VAPUS Model; see Drinkwater et al., 2019; Hill et al., 2018, 2019; Houran et al., 2020). Daniel and Musgrave (2017) likewise noted that “as people read, watch, or otherwise consume fictional narratives, they process those stories as if they were actually witnessing the phenomena those narratives describe, even if those events may be unlikely or impossible. These synthetic experiences can change beliefs, reinforce preexisting views, or even displace knowledge gained from other sources for elites as well as mass audiences” (p. 503). ChatGPT or similar AI-language programs might therefore generally prove out as innovative tools for what could be characterized

as “locating imagination in popular culture” (Van Es et al., 2021, p. 1). Accordingly, the social sciences might consider using this new technology for pulse or longitudinal measurements across a multitude of behavioral phenomena that describe the Zeitgeist, as well as the many anomalous entities that inhabit it.

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Appendix A

Sample ChatGPT Narrative of an Entity Encounter (generated 01 March 2023)

Write a convincing account of a real-life haunted house

The house had always had a reputation for being haunted. It had stood on the same spot for over a century, and during that time, many strange things had been reported to happen within its walls. People had reported hearing footsteps in the middle of the night, doors would slam shut on their own, and objects would move without explanation. Some even claimed to have seen ghostly apparitions wandering through the rooms.

One family moved into the house, hoping that the stories were just exaggerated rumors. But as soon as they stepped inside, they felt a chilling presence. The air was cold and heavy, and the hairs on the back of their necks stood on end.

As they began to unpack their belongings, strange things started to happen. Doors would open and close on their own, and they could hear whispering voices that seemed to be coming from nowhere. One night, the family woke up to find all of their furniture had been moved around while they slept. Chairs and tables had been stacked on top of each other, and some had even been turned upside down.

The family tried to ignore the strange occurrences, but they couldn't shake the feeling that they were being watched. They decided to call in paranormal investigators, who set up cameras and recorders throughout the house.

The footage they captured was shocking. Doors would open and close on their own, and objects would move without explanation. In one instance, a chair moved across the room, as if by an invisible force.

The investigators concluded that the house was indeed haunted, and that the family was living with a malevolent spirit. They advised the family to leave the house, as it was not safe for them to stay.

The family took their advice and moved out of the house, but the experience had left a lasting impression on them. They never forgot the eerie feeling of being watched, or the terrifying paranormal activity that had taken over their home.

To this day, the house remains empty, its windows boarded up, and its doors locked tight. The locals still talk about the haunted house, warning visitors to stay away from its ghostly inhabitants.

Appendix B

Sample ChatGPT Control Narrative (generated 01 March 2023)

Write a convincing account of someone seeing the aurora borealis for the first time

Sarah had always dreamed of seeing the Aurora Borealis, also known as the Northern Lights. She had heard stories of its beauty and magnificence from her friends who had witnessed it before. She planned a trip to Norway during the winter months to witness the natural wonder for herself.

As she stood outside, bundled up in her warmest clothing, she looked up at the sky in anticipation. Suddenly, a greenish glow appeared on the horizon, slowly growing and expanding across the sky. The colors shifted and danced, with hues of green, purple, and pink blending together in a mesmerizing display.

Sarah was spellbound. She had never seen anything like it before. The colors swirled and changed, creating a sense of movement and energy that seemed alive. The Northern Lights seemed to take on a life of their own, as if they were communicating with her in a language she could not quite understand.

As she watched, the colors intensified and brightened, casting a soft glow over the snowy landscape around her. It was as if she was standing in the middle of a dream world, a place of magic and wonder that she never knew existed.

For Sarah, the experience was truly unforgettable. She felt a deep sense of awe and wonder, and was overwhelmed by the beauty of the Northern Lights. She knew that this moment would stay with her forever, a memory that she would cherish for the rest of her life.

Witnessing the Aurora Borealis for the first time is a truly magical experience that leaves a lasting impression on those who are lucky enough to see it. The colors, movement, and energy of the Northern Lights create a sense of wonder and awe that is unlike anything else in the world.

Phänomenologie von KI-generierten "Entity Encounter"-Narrativen
James Houran Brian Laythe

Zusammenfassung: *Zielsetzung:* Wir haben das auf künstlicher Intelligenz (KI) basierende Sprachprogramm ChatGPT-3.5 verwendet, um zwölf Typen von Erzählungen über mystische, übernatürliche oder anderweitig anomale Begegnungen mit Wesenheiten zu vergleichen, die aus dem öffentlich zugänglichen Informationskorpus konstruiert wurden, und ihre Details mit der Phänomenologie spontaner Erzählungen mittels der Survey of Strange Events (SSE) und der Grounded Theory (gegenstandsbezogene Theoriebildung) des Haunted People Syndrome (HP-S) verglichen. *Methoden:* Eine strukturierte Inhaltsanalyse durch zwei unabhängige und blinde Beurteiler untersuchte, ob die zusammengesetzten KI-Erzählungen: (a) jeden Begegnungstyp abdecken, (b) der Rasch-Hierarchie der anomalen Wahrnehmungen der SSE entsprechen, (c) einen durchschnittlichen SSE-Score aufweisen und (d) auf die fünf Erkennungsmuster des HP-AbsS verweisen. *Ergebnisse:* Wir fanden mäßige Hinweise auf ein zentrales Begegnungsphänomen, das den KI-Erzählungen zugrunde liegt. Jeder Begegnungstyp wurde durch eine KI-generierte Beschreibung repräsentiert, die sich leicht auf die SSE abbilden ließ, wenngleich ihre Inhalte nur eine geringe Glaubwürdigkeit und geringe, aber im Allgemeinen positive Korrelationen untereinander aufwiesen. Die Erzählungen entsprachen auch unterdurchschnittlichen SSE-Werten und bezogen sich auf mindestens ein HP-S Erkennungsmuster. *Schlussfolgerungen:* Prototypische Darstellungen von Erfahrungen mit Entitätsbegegnungen, die auf populärem Quellenmaterial beruhen, kommen der Phänomenologie ihrer realen Gegenstücke sicherlich nahe, stimmen aber nicht vollständig mit ihnen überein. Wir erörtern die Auswirkungen dieser Ergebnisse auf zukünftige Studien.

Translation: Eberhard Bauer

Fenomenologia das Narrativas de "Encontros com Entidades" Geradas por IA
James Houran Brian Laythe

Resumo: *Objetivo:* Utilizamos o programa de linguagem baseado em inteligência artificial (IA) ChatGPT-3.5 para comparar doze tipos de narrativas de encontros com entidades místicas, sobrenaturais ou anômalas, construídas a partir de material no corpus de informações publicamente disponível, e comparamos seus detalhes com a fenomenologia de relatos espontâneos por meio da Survey of Strange Events (SSE) e da teoria fundamentada da Haunted People Syndrome (HP-S). *Métodos:* A análise de conteúdo estruturada por dois avaliadores independentes e ocultos explorou se as narrativas geradas por IA: (a) abrangeriam cada tipo de encontro, (b) mapeariam a hierarquia Rasch de percepções anômalas da SSE, (c) mostrariam uma pontuação média da SSE e (d) fariam referência aos cinco padrões de reconhecimento da HP-AbsS. *Resultados:* Encontramos evidências moderadas de um fenômeno de encontro central subjacente às narrativas da IA. Cada tipo de encontro foi representado por uma descrição gerada por IA que foi prontamente mapeada para o SSE, embora seu conteúdo tenha mostrado apenas uma credibilidade razoável e baixas, embora em maioria positivas, correlações entre si. As narrativas também correspondiam a pontuações de SSE abaixo da média e faziam referência a pelo menos um padrão de reconhecimento HP-S. *Conclusões:* As descrições prototípicas de experiências de encontro com entidades baseadas em material de origem pública certamente se aproximam, mas não correspondem totalmente, à fenomenologia de suas contrapartes na vida real. Discutimos as implicações desses resultados para estudos futuros.

Portuguese translation: Antônio Lima

Fenomenología de Narrativas de "Encuentros con una Entidad"
Generadas por Inteligencia Artificial (IA)
James Houran Brian Laythe

Resumen: *Objetivo:* Usamos el programa de lenguaje basado en inteligencia artificial (IA) ChatGPT-3.5 para comparar 12 tipos de narraciones de encuentros con entidades místicas, sobrenaturales, o anómalas construidas a partir de material del corpus de información disponible públicamente, y comparamos sus detalles con la fenomenología de los relatos espontáneos a través de la Encuesta de Sucesos Extraños (SSE) y la teoría fundamentada del Síndrome de la Gente Embrujada (HP-S). *Método:* El análisis de contenido estructurado realizado por dos evaluadores independientes y enmascarados exploró si las narraciones creadas por IA: (a) cubrían todo tipo de encuentro, (b) correspondían con la jerarquía Rasch de percepciones anómalas del SSE, (c) mostraban una puntuación media del SSE, y (d) hacían referencia a los cinco patrones de reconocimiento del HP-AbsS. *Resultados* Encontramos evidencia moderada de un fenómeno de encuentro central subyacente a las narraciones de la IA. Cada tipo de encuentro estaba representado por una descripción generada por la IA que correspondía claramente con el SSE, aunque sus contenidos mostraban sólo una credibilidad aceptable y correlaciones bajas pero generalmente positivas entre sí. Las narraciones también correspondían a puntuaciones de SSE por debajo de la media y hacían referencia al menos a un patrón de reconocimiento HP-S. *Conclusión:* Las descripciones prototípicas de experiencias de encuentros con entidades basadas en material de fuentes populares ciertamente se aproximan, aunque no coinciden plenamente, a la fenomenología de sus contrapartes de la vida real. Discutimos las implicaciones de estos resultados.

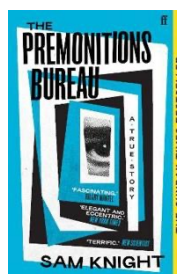
Spanish translation: Etzel Cardeña

Sam Knight Details How

Not to Build a Premonitions Bureau¹

Julia Mossbridge

University of San Diego



A Review of *The Premonitions Bureau: A True Account of Death Foretold* by Sam Knight. Penguin Press, 2022, 249 pp. \$22.57 (paperback)

I spent most of my time as I read and listened to *The Premonitions Bureau* trying to understand Knight's purpose for writing it. The British author did outstanding research, his voice is strong and compelling, and the stories of precognizing dire events – which is the understood definition of “premonition” here – are representative, intriguing, and skillfully conveyed. But to me it appears he was motivated to “explain away” rather than openly investigate the common and often disturbing experience of spontaneous precognition.

Knight thoughtfully details the late-1960s UK attempt to create a central a priori repository for dreams, visions, and intuitions from the public that seemed related to negative future events. The goal of this “premonitions bureau” was to examine the science of precognition and to prepare for, warn about, or potentially avoid the foretold futures. I will not repeat here much of what's already been said about *The Premonitions Bureau*; it has been heavily reviewed and celebrated in several widely read media outlets.

¹Address correspondence to: Julia Mossbridge, Ph. D., University of San Diego, Department of Physics and Biophysics, San Diego, CA, 92110, USA, jmossbridge@gmail.com.

Instead, I'll dive into the details that are particularly relevant for those interested in anomalous experience and cognition.

The UK premonitions bureau was launched in response to anecdotes from multiple percipients who foresaw, in one way or another, the collapse of a portion of a coal mine that was on a hill above the community of Aberfan, Wales. In this tragedy, 116 children and 28 adults were killed – the number of child fatalities was remarkably high because the slurry covered a schoolhouse when school was in session. The event was a highly emotional target, and according to existing theories about precognitive targets, this one should have produced clear spontaneous precognitions as an excellent attractor in a “time loop” relation with prior premonitions (Cheung & Mossbridge, 2018; Wargo, 2018). From a precognition researcher's point of view, at least the “emotional attractor” portion of the time loop hypothesis was supported. The event was preceded by scores of credible premonitions, so many that the potential that future premonitions could avoid additional tragedies motivated controversial UK psychiatrist John Barker to create his “premonitions bureau.”

Knight is at his best when he describes the experiences of the characters inhabiting Barker's world after the Aberfan disaster. From a scientific point of view, the most informative aspect of the book is the in-depth and careful portrayal of individual premonitory forms – some might call these “noetic signatures” (Wahbeh et al., 2022). He tells of one skilled precog who had light flashes associated with visions and of another consistently accurate precog who had dreams associated with predictive words. Some had dreams appropriate for their own future experience of the precognized event, again supporting the portion of the time loop hypothesis suggesting that one's own future experience is what is precognized rather than a global or third-person point of view

(Cheung & Mossbridge, 2018; Wargo, 2018). For instance, a schoolgirl who died in the collapse of the coal mine disaster reported to her mother on the day before the disaster her dream that she went to school and the school was gone, with something black all over it. This latter example brings up a key distinction that Knight covers well – even though some of the premonitions detailed in the book were described to witnesses prior to the events they predicted and others were told after the fact, in a sense they were all post-hoc. In other words, those premonitions reported prior to the event were later selected by the willing ears of the reporter or researcher who asked for stories of anyone who had heard of premonitions of the disaster. This is not the way rigorous research into spontaneous anomalous experience is done, of course. The methodologies used to examine spontaneous phenomena have come a long way since the 1960s (for a review, see Kelly & Tucker, 2015), and were well advanced of those described by Knight even during the era on which he focuses his attention.

Throughout the book, Knight informs the reader about most relevant aspects of present-day scientific thinking on time and cognition, including perceptual confusions, placebo and nocebo effects, confirmation bias, and mistaken memories. A concern I had with this coverage is that there is a glaring exception of any information about controlled scientific research on precognition, informational time travel, or retrocausality in psychology, neuroscience, or physics (for recent reviews, see Mossbridge, 2021, 2023). Instead, he pushes back on legitimate questions that naturally arise in the mind of any curious reader of a book about premonitions, including any questions related to the nonlinearity of time or time symmetry. He seems to see these questions as signs that the reader's mind has gone too far. That he counsels the reader that this might be the case made me wonder if his goal was actually to guide the mind of the reader away from curiosity, edge science, and open scientific discussion and towards appeals to authority and so-called "settled science."

There is something familiar about Knight's pushback against the possibility of the reality of precognition that resonates on every page. I am reminded of well-crafted but desperate attempts to claim that AI is not conscious (as if we understood what consciousness is). With the current backdrop of scientific discovery related to AI outpacing our attempts to understand it, the book can sometimes seem like an elegant but last-ditch attempt to avoid spelling out Knight's own premonition that we are on the cusp of a revolution in our scientific thinking about time. As I read it, I found myself wishing there existed a cross between Thomas Kuhn and Erik Erikson who could have befriended Knight before he wrote this book. In my mind, this person (let's call her "Thomrica Kuhnson") could have at first supported Knight in noting that when data obtained through the scientific method do not conform to our models about how the natural world works, it is reasonable to set aside these data as anomalous as long as our models continue to function well in other areas. You keep an eye on them, you do not ignore them, but you do not assume they are correct. As Knight's exploration went on, Kuhnson would explain that if the phenomena we at first called "anomalous" continue to crop up more and more, even as we improve to use excellent methods in our experimentation, we need to consider changing our models (Kuhn, 1970). Finally, Kuhnson would counsel Knight in his own growth process, gently helping him recognize that while holding onto our identities as authorities in a particular domain feels gratifying, it is more gratifying to learn new things and discover for ourselves the world of legitimate and hard-won data that exists outside our own experience and beliefs, a process that process that allows our egos to integrate with all other parts of the self (Erikson, 1946). But, alas, Kuhnson was not around. Instead, we have this book in which Knight does the intriguing work of valuing, then progressively discounting, the human capacity of precognition.



He does this creation–destruction work beautifully; several times I found myself gasping at his talent. At first, for example, *The Premonitions Bureau* feels like a human potential story that indulges and develops its real-world characters, especially the premonitions bureau founder, psychiatrist John Barker. Later, the same character is shamed in what feels like an unintentional attempt to destroy the reputations of those who would like science to do its job making progress in understanding the unknown. But it is more complex than that. The shame is in fact well–placed, given the abhorrence that arises when the reader reflects –using our modern sensibilities– on the things Barker did to try to “heal” mentally ill patients, including popularizing the lobotomy (which Knight duly notes is a practice Barker later tried to stop). This gives you a feeling for Knight’s ambivalence about the topic – on the one hand, he wants to do justice to human experience. On the other, he wants to show how deluded those are who believe precognition could be real, without publicly revealing the motivations behind his own interest in the topic.

After detailing the painstakingly researched experiences of multiple skilled precogs and the predictions that spurred Barker on in his 18–month maintenance of the bureau, Knight is careful in the final chapter to end with his conclusions that time is linear, most “premonitions” are either self–fulfilling prophecies based on the nocebo effect or confirmation bias, and Barker was delusional to keep his premonitions bureau open when only 3% of the predictions actually occurred, with most of these predictions made by two gifted psychics. Nowhere does he acknowledge any of the controlled studies of precognition, instead writing as if laboratory science after 1968 has nothing to contribute to the question. Nonetheless he is happy to quote modern physicists who support the idea of a single direction for the arrow of time (forward). The overall implication is that we should take from the fable of a foible–filled psychiatrist (Barker) the conclusion that precognition is a deluded emotion, not a capacity that tells us something about how the universe works. Knight demonstrates that the UK premonitions bureau was an exercise in

confusion, vanity, and personality disorders run amok, a description that is unfortunately likely to be accurate. Without stating it as such, his lesson seems to be that any modern effort would be the same. Unsurprisingly, that is not the lesson I took from this book.

About half–way through the book I realized I was focusing on the wrong question – instead of wondering what Knight’s purpose was for writing the book, I needed to assess my reason for reading it. It occurred to me that here was an opportunity to answer the question that plenty of people have asked me over the past decade or so – would it be helpful to create a present–day premonitions bureau? Can we actually use precognized information to navigate the future? Even 3% accuracy might be helpful if we could use machine learning, for instance, to narrow down which precognitions and psychics are likely to be predictive. For instance, assuming we could not have avoided the COVID pandemic, could we have better prepared for the virus if we had had a machine–learning–based publicly sourced premonitions bureau?

As Knight perhaps unintentionally reveals via his kind–hearted and accurately researched character–assassination process, the answer to this question depends on all the factors you would imagine. The lesson I took from *The Premonitions Bureau* is that a present–day precognition–powered roadmap of the future would require exactly the pieces Knight shows us were missing in the late 60s, the lapses that doomed the effort to failure not before Barker showed us what not to do. Specifically, it would need financial resources, technical and scientific innovation, ethical transparency, and the social–emotional intelligence of both staff at the bureau and the skilled precog contributors. In short, the success of a premonitions bureau depends on the level of public and private commitment to the project as well as the character, commitment, and clarity of those making it work. This is especially important considering the ethical implications of setting up a situation in which poorly–intentioned and/or mentally ill precogs can potentially create self–fulfilling prophecies, something Knight alludes to a few times without

Letter to the Editor¹

To the Editor,

I read with great interest the article “Understanding the factors at play in the sender-receiver dynamic during telepathy ganzfeld: A meta-analysis” (Pooley et al., 2023) in the latest issue of the *Journal of Anomalous Experience and Cognition* in which the authors disregarded Parra’s ganzfeld studies, remarking that: “serious fraudulent actions and widespread plagiarism conducted by Alejandro Parra [...] we deemed it best to remove all the Parra studies from the dataset (a total of 5 data points). I am in agreement to discard studies containing plagiarism, however these ganzfeld studies are not affected by plagiarism or experimental fraud. All ganzfeld studies were performed under supervision with me as co-author. I understand Parra was involved, but it is unfair to involve other people who worked on those studies as well, such as Juan Carlos Argibay (a statistical advisor) and me.

The results were evaluated by Juan Carlos Argibay (a statistical advisor) in a double masked fashion, which was standard protocol. I understand the “weight” of plagiarism would tend one to suspect experimental fraud, but it was absolutely impossible. Plagiarism refers to unacknowledged paragraphs in some articles, but they did not affect the validity of the experimental results. Lance Storm (2021a,b) never retracted our articles in AJP nor did Malcolm Schofield, editor of the *Journal of the Society for Psychical Research* (they both cited a list of articles plagiarized; but had faith in the experimental results). In fact, Storm, who analyzed specifically plagiarism, opined that although one of our studies had a large effect size as ($>.30$), another had a very small

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surfacing too obviously. I am confident that multiple private and public sector groups agree, and I feel everyone in the psi research community ought to think about what our role will be in these currently proprietary and below-the-radar premonition bureaus.

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- Mossbridge, J. (2021). Long time-frame causally ambiguous behavior demonstrated in an optical system. Preprint available at *Researchgate*: https://www.researchgate.net/publication/349106030_Long_time_frame_causally_ambiguous_behavior_demonstrated_in_an_optical_system
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- Wahbeh, H., Fry, N., & Speirn, P. (2022). The noetic signature inventory: Development, exploration, and initial validation. *Frontiers in Psychology*, 13, 838582.
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Recent Publications of Note 3(2)¹

Etzel Cardeña

Lund University

Anomalous Experience

Alcaraz-Sanchez, A. (2021) Awareness in the void: a micro-phenomenological exploration of conscious dreamless sleep. *Phenomenology and the Cognitive Sciences*. <https://doi.org/10.1007/s11097-021-09743-0>. A micro-phenomenological interview of conscious dreamless sleep revealed a state characterized by perception of absence, self-perception, perception of emotions, and perception of awareness.

Lameira, A.R., Perlman, M. Great apes reach momentary altered mental states by spinning. *Primates*, 64, 319–323 (2023). <https://doi.org/10.1007/s10329-023-01056-x>. The authors seem to (incorrectly) imply that seeking to experience altered states has been thought to be idiosyncratically human (other species choose to consume mind-altering nutriments) and present data from Youtube clips showing that great apes like to spin until they reach a probable experience of dizziness.

Maraldi, E. O., Costa, A., Cunha, A., Hamazaki, E., Flores, D., Pereira de Queiroz, G., ... Farias M. (2023). Social support, help-seeking behaviors, and positive/negative affect among individuals reporting mediumship experiences. *International Journal of Latin American Religions*, 7, 1–16. <https://doi.org/10.1007/s41603-023-00197-7>. In a study with 236 practitioners of mediumship/possession in Brazil, more positive than negative affect surrounded the experience, and lower fear was related with the experiences starting after adolescence and occurring within a religious context.

¹This regular feature summarizes recent papers of interest. If you want to recommend a paper, please send me a note with bibliographic information to etzel.cardena@psy.lu.se

ES (.025) leading him to conclude (Storm, 2021a, p. 97): “So there does not seem to be any convincing evidence of suspiciously inflated psi effect in article that Parra has co-authored.” However, Storm’s analysis was not quoted in Pooley, Murray and Watt’s article. Also, Storm quoted our letters (by Argibay and me) where we both stated that we were not involved in the writing of the text except for the data analysis. The experimental procedures, recruitment of participants, and data collection were conducted by me in four studies at least (both the ganzfeld studies and a mirror gazing ESP using Moody’s psychomanteum) and the same applies to Argibay in other studies on psychometry performed under the sponsorship of the Bial Foundation. Storm stated that Parra “exonerated” us (Argibay and me) from being responsible for the final content of the ganzfeld articles.

I submit this Letter to JAEX in order to distinguish that the Ganzfeld database and Parra’s plagiarism are two different things. Parra no longer leads the Institute of which I have been President since 2021. As a consequence, the databases (printed and digital) are available in our files section here for any researcher interested in checking them.

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Pooley, A., Murray, A., & Watt, C. (2023). Understanding the factors at play in the sender-receiver dynamic during the telepathy ganzfeld: A meta-analysis. *Journal of Anomalous Experience and Cognition*, 3(1), 42–77. <https://doi.org/10.31156/jaex.23878>

Storm, L. (2021a). Plagiarism in articles by Alejandro Parra. *Australian Journal of Parapsychology*, 21, 95–115.

Storm, L. (2021b). Plagiarism in articles by Alejandro Parra (Cont'd). *Australian Journal of Parapsychology*, 21, 208–219.

Scheinin, A., Kantonen, O., Alkire, M., Långsjö, J., Kallionpää, R. E., Kaisti, K., ... Scheinin, H. (2021). Foundations of human consciousness: Imagining the twilight zone. *The Journal of Neuroscience*, 41(8), 1769-1778. <https://doi.org/10.1523/JNEUROSCI.0775-20.2020>. Measures during anesthesia, non-REM sleep, and wakefulness showed that "unresponsiveness rarely denoted unconsciousness" as participants could report subjective experiences disconnected from the environment shortly after being aroused. The thalamus, cingulate cortices and angular gyri showed different activation in responsive and connected as compared with unresponsive and disconnected states.

Shaw, J., Gandy, S., & Stumbrys, T. (2023). Transformative effects of spontaneous out of body experiences in healthy individuals: An interpretative phenomenological analysis. *Psychology of Consciousness: Theory, Research, and Practice*. <https://doi.org/10.1037/cns0000324>. An interpretive phenomenological analysis with eight OBE participants found various transformative effects, probably mediated by decreased fear of death.

Stumbrys, T. (2023). Dispelling the shadows of the lucid night: An exploration of potential adverse effects of lucid dreaming. *Psychology of Consciousness: Theory, Research, and Practice*, 10(2), 152-163. <https://doi.org/10.1037/cns0000288>. In an online sample of (mostly) lucid dreamers, lucid dream frequency related to mental well-being, but not to bad sleep quality or dissociation. The low percentage (10%) of negatively toned lucid dreams compares favorably with that of ordinary dreams (see Valli et al., 2008).

Anomalous Cognition

Bentson, W., & Nies, M. (2023), A double blind, placebo controlled clinical trial on hospitalized Covid patients using informed water. *Journal of Scientific Exploration*, 37(1), 36-41. <https://doi.org/10.31275/20222837>. Eight days after baseline, Covid patients

treated with water with healing intention did significantly better in various (not all) indexes than the comparison group.

Bergquist, J., & Lundmark, S. (2023). De okända. In U. Andersson, P. Öhberg, A. Carlander, J. Martinsson, & N- Theorin (Eds.). *Ovisshehtens tid (A time of uncertainty)* (pp. 283-298). SOM-institutet. A national survey in Sweden conducted by the SOM Institute found that 33% endorsed a "sixth sense" and 21 % believe that some people can talk with the dead (more than twice women as men in both cases).

Silva, J., & Moreira-Almeida, A. (2022). Controlled experiments involving anomalous information reception with mediums: An analysis of the methods applied in recent studies. *Journal of Scientific Exploration*, 36(4), 749-759. <https://doi.org/10.31275/20222575>. A comparison of the eight recent extant studies on potential anomalous cognition by mediums reports impressionistically variables associated with significant results, including strong sitter motivation and supplying some information to the medium about the deceased.

Wortman, C. B. (2023). Psychic mediums for the bereaved: Exploring their procedures and contemplating the use of their services. In L. A. Burke & E. Rynearson (Eds.), *The restorative nature of ongoing connections with the deceased* (pp. 176-189). Routledge. <https://doi.org/10.4324/9781003105077>. An international authority on grief refers to potential important benefits from consulting with psychic mediums, quoting serious psi literature and referring to a very accurate reading without condescension or caveats.

JAEX Thanks the Reviewers for Volume 3

Michael Acree, Ph. D.

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