

# Survival Psi and Somatic Psi: Exploratory Quantitative Phenomeno- logical Analyses of Blinded Mediums' Experiences of Communication with the Deceased and Psychic Readings for the Living

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**ABSTRACT:** In this study, we quantitatively assessed mediums' phenomenology during readings in which survival psi is ostensibly used to telepathically communicate with physically deceased targets (discarnates) and during psychic readings for living targets to represent somatic psi which cannot be experimentally demonstrated. We also correlated dimensions of phenomenology with reading accuracy. Ten Windbridge Certified Research Mediums (WCRMs) participated in a baseline assessment and then in three counter-balanced conditions—a blinded reading for a living target, a blinded reading for a deceased target, and a control condition—and completed the Phenomenology of Consciousness Inven-

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tory (PCI) at baseline prior to the first condition and after each of the three conditions. In a significant proportion of the readings (74%;  $p = .032$ ), the blinded WCRM's impressions accurately reflected whether the target was living or deceased. Hypnoidal state scores, which estimate an individual's 'trance state,' were significantly higher for each of the two reading conditions than for the baseline and control conditions. Both types of readings demonstrated significantly higher scores for the PCI (sub)dimensions of altered time sense, imagery, imagery amount, and direction of attention and lower scores for the dimension volitional control. As predicted, scores for love were significantly higher for blinded readings for deceased targets than for living targets ( $3.65 \pm 0.63$  vs.  $2.75 \pm 1.18$ , respectively;  $t[9] = 2.78$ ,  $p = .02$ , two-tailed). The global accuracy scores of readings for living targets ( $2.38 \pm 1.51$ ) were significantly negatively correlated with imagery vividness ( $r[6] = -0.76$ ,  $p = .027$ ) and absorption ( $r[6] = -0.74$ ,  $p = .037$ ). The global accuracy scores given to readings for deceased targets ( $3.22 \pm 1.56$ ) were not significantly correlated to any PCI dimensions. However, the correlations were significantly different between the deceased target condition and the living target condition for positive affect and accuracy ( $z = 1.92$ ,  $p = .027$  [one-tailed]). Overall, the novel quantitative evidence collected during this study under blinded, randomized, and counterbalanced conditions may reflect the general phenomenology of psi and supports and adds to the empirical comparisons of mediums' psychic functioning and survival psi experiences.

**KEYWORDS:** mediums, psychic, psi, phenomenology, PCI

Communication with the deceased was a useful social task accomplished by shamans or other individuals in ancient cultures and continues to be a ubiquitous experience for modern mediums of various belief systems all over the world (Hunter & Luke, 2014). Often, mediumship is divided into two main categories based on the phenomena produced: physical mediumship, in which physical effects such as table-tipping, direct voice, and materialization are produced; and mental mediumship, in which information purportedly from the deceased is communicated to the living (Beischel & Zingrone, 2015). Within each of these categories as well as across mediums and across readings, the mediums' experiences may range along a continuum of waking to trance states. During deeper trance states "the normal personality is . . . completely dispossessed by the intruding intelligence" and the medium "retains little or no recollection of what has been said or done in her 'absence'" (Gauld, 1982, p. 29).

In Western societies, rampant claims of communication with the deceased by fraudulent mediums for personal gain and a longing "to take on the materialists at their own game" (Carter, 2012, p. 135) spurred researchers to investigate the accuracy of the information re-

ported by mediums under the controlled conditions of the laboratory. For example, research with mediums in deep trance states performed by the British and American Societies for Psychical Research in the late 19th century (Blum, 2006; Fontana, 2005) produced “hundreds of pages . . . devoted to transcripts of readings . . . and discussions of interpretations and the validity of the mediums’ statements” (Schouten, 1994, p. 222). Many modern investigators work with mental mediums who do not undergo deep trance states (e.g., Beischel et al., 2015; Jensen & Cardeña, 2009; Kelly & Arcangel, 2011; O’Keeffe & Wiseman, 2005; Robertson & Roy, 2001; Roy & Robertson, 2001, 2004; reviewed in Beischel, 2014; Beischel & Zingrone, 2015; and Rock et al., 2021), making it difficult to apply the findings from research with mediums from the 1880s to modern research and modern mediumship phenomena in general.

Controlled and replicated research has demonstrated that certain skilled mental mediums are able to report accurate and specific information about the deceased loved ones (hereafter termed *discarnates*) of living people (termed sitters) using anomalous information reception (AIR); that is, without prior knowledge about the discarnates or sitters, in the absence of sensory feedback, and without using deceptive means (Beischel et al., 2015; Beischel & Schwartz, 2007; Rock et al., 2014). For example, in 31 readings performed by 20 blinded mediums on the phone with a blinded experimenter serving as a proxy sitter in place of an absent sitter, the mediums provided responses to questions about the physical and personality descriptions, hobbies, and cause of death of the discarnate as well as specific messages for the absent sitter. The absent and blinded sitters then scored each item in two readings—a target reading intended for them and a decoy reading intended for a different sitter—while remaining blinded to which was which. A conservative  $2 \times 2$  chi-squared analysis of the items scored as hits (obvious fit, direct hit) and misses (no fit, clearly wrong) demonstrated significant differences between the ratios of hits to misses in the target and decoy readings, with a small effect size ( $\chi^2 [1, N = 2474] = 66.69, p < .0001, \text{Cramer's } V = 0.17$ ). That is, when readings provided by blinded mediums were scored by blinded raters, target readings received significantly more hits and less misses than decoy readings (Beischel et al., 2015). The findings from that multipart study also included a significant portion (65.5%) of blinded sitters, when faced with a forced choice task, choosing the target reading intended for them ( $n = 38$ ) vs. a decoy reading ( $n = 20; N = 58, p = .01$ , binomial probability, one-tailed; Beischel et al., 2015). These and sim-

ilar findings support the existence of AIR but cannot elucidate the anomalous source of the information mediums report (e.g., Beischel et al., 2017; Jamieson & Rock, 2014; Rock, 2014).

Historically, multiple hypotheses have been proposed for the source of mediums' information. Before addressing them, we wish to clarify our use of the term "psi" as a purely descriptive term denoting "anomalous processes of information or energy transfer that are currently unexplained in terms of known physical or biological mechanisms" (Bem, 2011, p. 407). The term psi "neither implies that such phenomena are paranormal nor connotes anything about their underlying mechanisms" (p. 407). Psi includes two major phenomena which are not mediated by the senses or by logical inference: (a) anomalous cognition, previously termed extrasensory perception (ESP), and (b) psychokinesis (PK). Anomalous cognition involves telepathy, the transfer between people of information, thoughts, or emotions; clairvoyance, the transfer of information about or the perception of distant objects, events, or situations; precognition (conscious cognitive awareness of), presentiment (physiological reaction to), or premonition (affective apprehension of) future events that could not be inferred or anticipated; and retrocognition, the transfer of information about a noninferable past event. However, the distinction between these types of anomalous cognition does not reflect actual separate mechanisms but is related, instead, to how they are practically tested or conceptualized (Cardeña, 2018). PK is the apparent influence of thoughts or intentions on physical or biological processes or objects unmediated by physical forces; it includes macropsychokinesis (macro-PK), effects without any apparent mechanical explanation on observable objects, and micropsychokinesis (micro-PK), effects on events too small to be observed, such as the output of a random number generator. In addition, the possibility of consciousness surviving physical death is also considered to be a psi phenomenon (e.g., Braud, 2005). Although a discussion of the empirically demonstrated nature of these phenomena is outside the scope of this article, in a recent review of the literature, Cardeña (2018) found that "the evidence provides cumulative support for the reality of psi, which cannot be readily explained away by the quality of the studies, fraud, selective reporting, experimental or analytical incompetence, or other frequent criticisms" (p. 663).

Historically proposed theories regarding the source of mediums' information include: (a) the survival of consciousness hypothesis which proposes the continued existence, separate from the body, of at least

portions of an individual's consciousness or personality after physical death that are able to communicate with mediums; (b) the psychic reservoir hypothesis which posits that all information since the beginning of time is stored somehow and somewhere in the universe and mediums are accessing that cosmic store rather than communicating with discarnates (reviewed in Fontana, 2005); and (c) the super-ESP or super-psi theory (Almeder, 1992; Braude, 1992, 2003; Carter, 2012; Fontana, 2005; Gauld, 1982, Hart, 1959) which proposes that mediums are retrieving information about the deceased through telepathy with the living, clairvoyance, and/or precognition; this hypothetical explanation is deemed "super" by its ostensible requirement of "more refined and extensive psychic functioning than we discover in controlled laboratory studies" (Braude, 2003, p. 11). According to the super-ESP hypothesis, a medium may receive information through multiple psi processes:

telepathically from the mind of the sitter—even though the latter may not be consciously thinking about the information at the time, telepathically from the minds of people elsewhere, clairvoyantly from the environment, or even precognitively from the future moment when the sitter checks on the facts given in the communications and finds them to be correct. (Fontana, 2005, p. 104)

However, the usefulness of the super-ESP theory or "attitude of mind" (Gauld, 1982, p. 129) has been called into question based on its "arbitrary and dogmatic" nature (Almeder, 1992, p. 226). The "peculiarly elusive theory" (Gauld, 1982, p. 129) of super-ESP is "not verifiable either experimentally or otherwise" (Almeder, 1992, p. 226). As has been previously highlighted (Beischel et al., 2017), using theoretical constructs such as this to explain the source of the information reported by mediums could be considered a "fallacy of misplaced concreteness" (Whitehead, 1929)—that is, the error of mistaking the abstract for the concrete, also called reification; see also Rock and Krippner (2008). Thus, the utility of the concept of super-ESP in relation to the analysis of empirical data—versus as a purely philosophical exercise—seems limited.

It is important to note that the survival hypothesis also requires some form of psi. Because no physical, sensory methods are used to transfer information from the discarnate to the medium, psi is required in order for AIR to occur. Indeed, either the medium scans the mind of the discarnate or the discarnate sends information telepathically to the medium. Sudduth (2009) termed this process "survival

psi.” Conversely, the term “somatic psi” (Beischel & Rock, 2009) can be used to collectively describe the hypothetical use on the part of the medium of precognition, telepathy with living persons, and clairvoyance, including of a psychic reservoir, but not including survival psi as an explanation for the source of information about discarnates. The term ‘somatic’ is used in reference to the two ‘bodies’ from which mediums, according to the somatic psi explanation, purportedly draw information: the physical body of the living sitter and the “body” of information described by the psychic reservoir hypothesis. Although several previous studies have collected mediums’ reports of their experiences involving communicating with discarnates (i.e., survival psi; Beischel et al., 2017; Rock et al., 2009; Roxburgh & Roe, 2013), no reports of mediums claiming to use or experience somatic psi exist.

Studies of the content of the information reported by mediums under blinded conditions—though important in establishing the reality and limits of mediumship—cannot aid in distinguishing between somatic psi and survival psi as the better explanation for the source of the information. Regardless of the content of a medium’s reading, once all sensory explanations have been eliminated, somatic psi and survival psi are equally plausible explanations for the source of the information at this time. For example, a statement including information unknown to the sitter that is later verified by someone else can be explained by telepathy with the latter individual. Accurate information about an event that has not yet occurred can be attributed to precognition. In either of those cases, an equally plausible explanation is that the information originated from a discarnate.

This stalemate has plagued mediumship researchers since its conception. As investigators became “increasingly frustrated with their inability to resolve” questions about the source of mediums’ information (Kelly & Arcangel, 2011, p. 11) and “interest shifted towards psychic abilities . . . in the 1930s, scientific research into mediumship has steadily declined” (Fontana, 2005, p. 226). Recently, however, we have been able to address the impasse regarding the source of mediums’ information from a different direction: phenomenology.

Phenomenology “is a term that refers to a philosophy, a research approach and, in a more general way, the study of experience” (Pekala & Cardeña, 2000, p. 59). The phenomenological investigator examines “the way things are experienced by the experiencer, and . . . how events are integrated into a dynamic, meaningful experience” (Hanson & Klimo, 1998, p. 286). Because during deeper trance states mediums enter a “sleep-like state” involving amnesia (Sher, 1981, p. 108),

historical researchers who studied mediums were unable to question them about their experiences.

Conversely, contemporary investigators can engage in phenomenological research with mental mediums who are able to, for example, describe, discuss, and complete questionnaires about their experiences during survival psi and how those experiences differ from those that occur during psychic readings for the living, a situation that mediums can actually experience which mimics the theoretical somatic psi construct. This research direction is similar to the phenomenological assessment of experiences such as the ganzfeld (e.g., Wackermann et al., 2008), psychokinesis (e.g., Heath, 2000), synchronicity (e.g., Hanson & Klimo, 1998), and psychic experiences including intuition, dreams, hallucinations, and other telepathic events (Irwin & Watt, 2007) as well as near-death and past-life experiences, synesthesia, lucid dreaming, and mystical, hallucinatory, and anomalous healing experiences (Cardeña et al., 2013).

Four previous phenomenological studies (Beischel et al., 2017; Rock & Beischel, 2008; Rock et al., 2009; Rock et al., 2014) elucidated several aspects of the experiences of American mental mediums; we will summarize those findings here. Studies of other populations of mediums, such as British Spiritualist and Brazilian Spiritist mediums, have been reviewed elsewhere (Beischel & Zingrone, 2015; Hageman et al., 2010; Harris & Alvarado, 2014).

First, using a quantitative analysis, Rock and Beischel (2008) employed the Phenomenology of Consciousness Inventory (PCI; Pekala, 1991b), a standard questionnaire quantifying the intensity of various phenomenological dimensions, which we will describe in more detail below. Seven certified research mediums—mediums who had been pre-screened and had demonstrated the ability to consistently report accurate and specific information about discarnates under controlled laboratory conditions (Beischel, 2007)—completed the PCI after a mediumship reading condition and a non-reading control conversation.

Findings revealed that the mediums received PCI intensity scores for the reading condition that were significantly higher than for the control condition for experiences including alterations in body image, time sense, and state of awareness. In contrast, they received significantly lower scores for the reading condition than the control condition with regard to dimensions including self-awareness, volitional control, and memory.

From these findings, Rock and Beischel (2008) concluded that the mediums' phenomenology associated with the mediumship reading



condition “appeared to be significantly different from phenomenology associated with the control condition” (p. 157). Also in this study, the mediums’ PCI intensity scores for negative affect were significantly higher for the reading condition than for the control condition. However, subsequent research suggested that this finding was most likely due to the positive nature of the control condition and not to the presence of negative emotions during mediumistic experiences (Beischel et al., 2017).

In a second quantitative study, Rock et al. (2014) used the PCI to compare the phenomenology of 19 claimant (vs. certified) mediums during mediumship readings and a control condition. The results suggested that the mediumship reading condition did not induce a “major reorganization in pattern structure” that would imply an altered state of consciousness (p. 190). Thus, the findings from this larger sample of claimant mediums contradicted Rock and Beischel’s (2008) previous findings of a difference between conditions among a smaller sample of certified mediums.

In addition to the two quantitative studies just described, a qualitative thematic analysis of six certified research mediums’ phenomenology (Rock et al., 2009) indicated that mediums’ subjective experiences during mediumship/survival psi readings for discarnates are distinguishable from their experiences during psychic readings for the living. The researchers identified nine essential aspects of the mediums’ ostensible discarnate communication experiences and seven essential aspects of psychic reading experiences. A comparative analysis of the essential aspects of the two types of experiences revealed several similarities, including multimodal, visual, auditory, and tactile information and ‘just knowing’ themes being present in both; as well as differences, with olfactory, verificatory ‘sign,’ and independence themes found only in mediumship readings. These data suggest that these certified research mediums can differentiate between the ostensible discarnate communication of survival psi and psychic readings for the living. For example, one participant in that study referred to the differences in this way: “A psychic reading is like reading a book . . . a mediumship reading is like seeing a play.” This finding is similar to that of Roxburgh and Roe (2013) who collected responses from 10 Spiritualist mediums during semi-structured interviews and analyzed them using Interpretative Phenomenological Analysis (IPA). One participant used the metaphor of energy “to make the distinction between a psychic link that is ‘static’ and ‘dense,’ and spirit communication that is ‘vibrant’ and ‘lighter’” (p. 33).



Finally, a large two-part qualitative and quantitative online survey study by Beischel et al. (2017) included the item, “Can you tell the difference between communication from the deceased and psychic information about the living?” to which 97% of 127 participants ( $n = 123$ ) indicated ‘Yes.’ That subset was invited to respond to two subsequent counter-balanced, open-ended survey items about their experiences when receiving communication from discarnates and when getting psychic information about the living; 122 participants—108 self-identified and 14 certified mediums—provided complete responses. The researchers used Linguistic Inquiry and Word Count (LIWC) text analysis software to quantitatively analyze the participants’ retrospective descriptions of mediumistic and psychic experiences. Compared to descriptions of psychic readings, descriptions of mediumistic experiences contained significantly higher proportions of words in the LIWC categories of social processes (family, friends), perceptual processes (sight, sound, touch), ingestion (cooking, food), past-focused time orientation (former, previously), and religion (spirit, god), and significantly fewer words in the LIWC category of insight (discern, categorize). No differences resulted for the categories of positive and negative emotions, present-focused and future-focused time orientation, health, and money.

Beischel et al. (2017) also qualitatively analyzed the survey responses using a content analysis methodology and found three overarching, summative themes regarding mediumistic communication: preparation, communication triangulated, and experience of the communication. Four overarching, summative themes emerged from the text regarding psychic readings for the living: establishing the connection, experiencing the connection, content of the reading, and psychic information flowing from various sources. Participants described both types of experiences as involving similar emotional aspects as well as multiple sensory modalities often functioning concurrently. They described differences in the purpose of the two types of experiences, and only their descriptions of mediumistic experiences involved the specific sensory modality of taste and concepts related to food. They also described their cognitive processes differently, with mediumship seeming to be a less analytical, more intuitive process than psychic experiences. One participant contrasted the experiences in this way: “Psychic information comes from some place different than the energy of the dead. It is all around us, less focused, less of a high vibration than the dead. It is not a specific energy. It is a potential energy” (p. 76).

The limitations of the methods used in these studies prevent us from drawing firm conclusions about the source of mediums' information. For example, the phenomenological differences between conditions demonstrated by Rock and Beischel (2008) may have arisen psychologically, considering that the participants were aware of which condition they were experiencing; that is, merely contemplating being administered a mediumship condition may elicit certain phenomenological effects. The same can be said for the research examining mediums' reports regarding the qualitative differences between experiences during readings for the living and for discarnates (Beischel et al., 2017; Rock et al., 2009).

In the current study, we addressed these limitations by quantitatively comparing certified research mediums' phenomenology during two relevant conditions. Because somatic psi is a theoretical construct and not a real-world experience reported by mediums, it cannot be requested of participants in a laboratory setting. As such, psychic readings for the living serve as the closest surrogate or representative experience that can be examined experimentally. Thus, in the current study we examined—under randomized, counter-balanced, and blinded conditions—(a) mediumship readings for deceased targets in which survival psi is ostensibly used, and (b) psychic readings for living targets in which 'regular' psi—telepathy, clairvoyance, and/or precognition; hereafter termed *psychic functioning*—is purportedly used. The study conditions included the blinding—of both the mediums and the experimenter with whom they interacted—to the living or deceased status of the targets.

Anecdotally, when describing their regular, non-research readings for clients, the participants have noted that in a single reading they may experience both survival psi involving information related to discarnates and psychic functioning involving information about the living client. The current study aimed to determine if data collected under controlled conditions would mirror those reports and the findings from qualitative and quantitative research examining mediums' abilities to distinguish between survival psi and psychic functioning related to the living.

Our primary hypothesis for this study was: A difference exists between mediums' scores from a standard quantitative measure of phenomenology for different study conditions: readings for living and deceased targets and baseline and control conditions.

Our secondary hypothesis was: Correlations exist between mediums' phenomenology and (a) mediumship ability/accuracy, and (b)

psychic ability/accuracy. Rock et al. (2014) examined possible correlates of mediumship reading accuracy specifically in regard to the five PCI dimensions of negative affect, altered state of awareness, self-awareness, volitional control, and memory in claimant mediums and found a statistically significant negative correlation ( $r[16] = -.43$ ,  $p = .04$ ) between accuracy scores and self-awareness. Thus, accuracy scores increased as the participants became less “aware of being aware of myself” (Pekala, 1991a, p. 132). Building on this finding, in the current study we examined certified—rather than claimant—mediums’ experiences to assess potential relationships between phenomenology and accuracy scores for both mediumship readings and psychic readings including all 26—rather than only five—PCI dimensions.

Finally, because in anecdotal reports of mediums’ experiences of survival psi they often mention feelings of love, our tertiary hypotheses were (a) that participants would experience love to a greater degree, reflected as higher PCI dimension scores, during readings for deceased targets compared to readings for living targets, and (b) that the relationship between their experiences of love and accuracy would be stronger during readings for discarnates compared to readings for the living.

## Method

Briefly, in this study, the experiences of 10 mediums were phenomenologically assessed for a baseline condition and for three randomized, counter-balanced experimental conditions: a control condition, a blinded reading for a living target, and a blinded reading for a deceased target. During each of the two reading conditions, the experimenter gave the medium the first name of a target and then asked specific questions about the target. Both the mediums and the experimenter were blinded to the status of any target as being living or deceased. After each condition, the medium completed a quantitative instrument—the PCI—in reference to their phenomenology for that condition. We provide full methodological details below and report data as means  $\pm$  standard deviations.

## Participants

There were three groups of participants in this study: mediums, sitters, and psychic research reading recipients. Following is a description of each group.

The medium participants in this study were Windbridge Certified Research Mediums (WCRMs), that is, mediums who had been screened, tested, and trained using a peer-reviewed eight-step certification procedure (described in detail in Beischel, 2007). WCRMs have volunteered regularly to participate in various aspects of research, have demonstrated the ability to report accurate and specific information about individual discarnates under several different controlled laboratory conditions, and have agreed to abide by specific standards of conduct including not providing readings that are not specifically requested (Beischel et al., 2014-2015).

According to conventional wisdom, all mediums are psychic, but not all psychics are mediums. “It is common for the general public to confuse spirit mediums with ‘psychics,’” and many spirit mediums now “bill themselves as ‘psychic mediums,’ trying to link more into a popular vocabulary” (Emmons, 2014, p. 309). Indeed, many of the larger WCRM population, in addition to providing mediumship readings, also regularly perform psychic readings for the living as part of the services they offer clients. Of the available 15 WCRMs on the team at the time of this study, 14 volunteered, and 10 were randomly selected to participate: one male and nine females (mean age = 51.07 ± 6.39 years), all of whom had a history of providing both mediumship and psychic readings to their clientele. We collected complete sets of PCI data from these 10 WCRMs.

The sitter participants’ role in this study was to provide accuracy scores for the WCRMs’ readings for deceased targets (described below). Prior to 2017 when mediumship research was moved from the Windbridge Institute to the Windbridge Research Center, nearly 1,000 potential research sitters—living individuals wanting to receive messages from discarnates through a medium during a research reading—had volunteered to participate in mediumship research by completing an online form through the Institute website. From the sitter pool, potential participants who reported wanting to hear from one specific discarnate were randomly selected (using [www.random.org](http://www.random.org)). One of us (MB) contacted potential sitters by email to confirm their availability and willingness to participate. Those giving consent provided the first name and gender of the discarnate from whom they wished to hear. All sitters reported that they were 18 years of age or older, resided in the US, and spoke and wrote English as their primary language. No further demographic information about sitters or discarnates was collected.

The role of a third participant population, Psychic Research Reading Recipients (PRRRs), was to provide accuracy scores for the WCRMs' readings for living targets: themselves (described below). PRRRs were specifically recruited through email lists and word-of-mouth. Volunteers completed an online form. The PRRRs reported that no one close to them had died during their lives—that is, their parents, grandparents, siblings, and friends were all still living; we specifically sought this characteristic to lessen the risk of discarnates attempting communication with the WCRMs during readings for living targets. We randomly selected PRRRs (using [www.random.org](http://www.random.org)) and MB contacted them by email to confirm their availability and willingness to participate. Those giving consent provided their first name and gender. All PRRRs reported that they were 18 years of age or older, resided in the US, and spoke and wrote English as their primary language. No further demographic information about PRRRs was collected.

Ten PRRRs and 10 gender-matched sitters (see below) participated in the study.

## Procedure

The study consisted of a repeated-measures design with three counter-balanced conditions: (a) a mediumship reading in which the WCRM and the experimenter were blinded to the fact that the target was a discarnate, (b) a psychic reading in which the WCRM and the experimenter were blinded to the fact that the target was a living person, and (c) a control condition. In this study, the independent variable was the source from which the WCRMs purportedly received information about a target. In one of the reading conditions, the purported source was survival psi—communication from a discarnate associated with a sitter; in the other, it was psychic functioning associated with a living PRRR. Our goal was to use the third control condition to compare the phenomenology of the two reading conditions in which the WCRMs purportedly received information using psi with one in which they did not use psi.

For the control condition, a research assistant gathered Internet facts about two discarnates—one male and one female—who were famous enough for sufficient content to be available online. We used real discarnates unknown personally to anyone involved in the study in an attempt to dissuade “drop-in” discarnates from attempting to communicate with the WCRMs. The research assistant created scripts con-

taining factual statements about those discarnates based on the collected information and then provided the scripts to an experimenter (JB). At the start of control sessions, the experimenter instructed the WCRMs that they should not use psi and provided them with the first name of a control target. The WCRM was kept blinded to the actual identity of the target. The experimenter then read aloud the statements from the script, such as, “He loved jazz.” The experimenter then asked specific questions about that target identical to the questions asked during the reading conditions, such as, “What are the hobbies, activities, or interests of the target?”. In response to the questions, the WCRMs verbally reported back the relevant information provided in the script.

The order of the two readings and the control condition were randomized and scheduled over a three-week period so that a seven-day wash-out interval was included between each session. To avoid PCI score differences being an artifact of target gender differences, we designed the three conditions so that gender was the same between them. That is, once a living target for the first condition was randomly established, we randomly chose a gender-matched deceased target from the pool and the matching control script of the same gender was used for the control condition. Each of the reading conditions consisted of a recorded telephone session in which only the blinded medium and a blinded experimenter (JB) were on the phone; no sitters or PRRRs participated in the phone sessions. In summary, each of the 10 WCRMs performed, in a random order, one mediumship reading for a sitter’s deceased target, one psychic reading for a living PRRR target, and one control session in which no psi was used to report information about a deceased target unknown to anyone participating—with all targets being of the same gender.

In addition, it should be noted that in this study we intentionally did not include a placebo or “sham” reading condition whereby the mediums are blinded to the fact that they are instructed to communicate with a fabricated, rather than an actual, target. As has been discussed previously (Beischel & Rock, 2009), ethical issues arise regarding asking the participants to “open up” to a sham target; because the source of information obtained during AIR is unknown, opening up without a “known” entity with which to communicate may not be psychologically or spiritually safe. In addition, because the WCRMs who served in this study are permanent members of the pool of credentialed research mediums at the Windbridge Research Center, it is important to maintain a trustworthy relationship with them. This

relationship would have been put at great risk if the mediums were asked to “open up” to a sham entity; we knew this risk to be realistic because WCRMs had told us previously about experiencing fear and anger when they discovered that their own skeptical clients had provided sham targets for readings. Thus, in the proposed study, a sham condition was not included, and the WCRMs and experimenter were simply blinded to whether an individual target was living or deceased. In addition, we asked WCRMs not to enlist the assistance of any other entities, such as spirit guides, during readings except for target discarnates during mediumship readings.

## **Blinding**

**Mediums.** During two of the study conditions—readings for living PRRRs and readings for sitters’ deceased targets—the WCRM was blinded to the condition in which they were participating. As noted above, this procedure mimics the ‘real-life’ scenario that mediums commonly encounter in their regular practices during which psychic information about the living sitter as well as messages from discarnates are conveyed. Because the control condition required that the medium report information not gained using psi abilities but rather acquired from statements read aloud to them, it was not possible to blind the medium to which event was the control condition or to the fact that the control target was an actual discarnate.

In the two reading conditions, the WCRMs were blinded to whether the target was living or deceased. The instructions used to inform the mediums at the beginning of the study included the statement: “During this study, you will be randomly assigned two readings. Each of the readings may be a psychic reading for a living target or a mediumship reading for a deceased target. That is, you may read for two living people, two deceased people, or one of each.” This statement was deceptive in that the design actually involved each medium performing readings for one living and one deceased target. When participants asked us directly how any differences in conditions would be evident when they might read for two living or two deceased targets, we told them we could see differences by averaging the results from all the participants in the study.

As is common practice in research with these mediums, the protocol attempted to address precognition on the part of the medium as well. The following was included in the mediums’ initial training materials:



“We will not be able to provide you with any feedback regarding the targets for whom you read (ever). This is to eliminate precognition as an explanation for the results.” No specific feedback has been or will be provided to the participants.

**Experimenters.** The experimenter interacting with the mediums during the readings (JB) was blinded to whether a specific target was living or deceased. This procedure addressed unintentional cueing by the experimenter as well as real-time telepathy—intentional or subconscious—with the experimenter by the medium. Because the mediums were familiar with this experimenter and had experience performing readings with her, it was necessary that she serve as the experimenter during the study in order to (a) garner trust from the medium participants, and (b) prevent the introduction of the unnecessary stressor of a new experimenter with whom the participants were not familiar.

During the two randomized reading conditions, JB was aware that one reading was for a living person and one was for a discarnate—but not which reading was which for any given medium. Even if a reading included the medium’s experiences of the target’s status as living or deceased—the medium saying, for example, “she is . . .” vs. “she was . . .”—JB did not know if those experiences accurately reflected the actual status and, thus, remained blinded to the status of all the targets.

The experimenter who consented, screened, and trained the PRRRs and sitters and collected the first names and genders of PRRRs and of sitters’ discarnates (MB) was blinded to which mediums read which pairs of targets.

**Sitters and PRRRs.** Again, no sitters or PRRRs participated in the phone sessions, so they did not hear the readings as they took place. However, these participants each received one transcribed reading for scoring (and no decoy readings), so they were not blinded to the origin of the readings during scoring.

Though this experimental protocol deviates from previously published accuracy testing standards (e.g., Beischel, 2007; Beischel et al., 2015), for this study we were primarily interested in the lived experiences of mediums during readings mimicking real-world situations rather than in testing their accuracy. The mediums’ blinding was complete, but the sitters’ and PRRRs’ blinding was not. These conditions cannot address the possible effects of rater bias, which makes these

accuracy results unsuitable for inclusion in future meta-analyses regarding the accuracy of mediums.

## Readings

Once a matched-gender sitter-PRRR pair of participants was screened and trained, MB emailed JB two first names. JB then chose the control script of the same gender, randomly selected a medium, randomized (using [www.random.org](http://www.random.org)) the order of the three sessions—two readings and a control, and scheduled the three sessions with that medium. JB then notified MB of when the reading for a particular target was to take place. MB notified the PRRRs of the times of the readings and asked them to “be open” to the medium. For sessions involving deceased targets, MB notified the living sitters of the times of the readings and asked them to invite their discarnates to participate at that time.

At the scheduled time for each of the two readings, JB phoned the medium, provided the medium with the first name of the target randomized to that session, and asked the medium to respond to the following items regarding the named target:

1. Describe the physical appearance of the target.
2. Describe the personality of the target.
3. What are the hobbies, activities, or interests of the target?
4. Please provide any additional relevant information about the target.

We standardized this question set across reading conditions in order to protect blinding and eliminate phenomenological differences due to differential task demands. We asked the same set of questions during the control condition.

JB audio-recorded the blinded pairs of readings for deceased and living targets, transcribed them, formatted them into lists of items, and sent the lists by email to a research assistant. MB provided that research assistant the contact information for the two participants in a pair, and the research assistant sent the readings to the respective participants for scoring; see below. Because the scoring instructions were different based on the type of participant—for example, “score the reading as to how accurately it portrays you” for PRRRs versus “score the reading as to how accurately it portrays your primary discarnate” for sitters—MB and the research assistant were required to

know which names were which type of target so that they could provide the appropriate training and scoring materials to the participants.

### Accuracy Scores

We asked sitter and PRRR participants to provide global scores for readings for deceased or living targets, respectively. All the participants used the following scoring options based on a standard system used for mediumship readings (Beischel, 2007; Beischel et al., 2015). Possible scores the participants could select from were:

- 6: *Excellent reading, including strong aspects of psi\*, with essentially no incorrect information.*
  - 5: *Good reading with relatively little incorrect information.*
  - 4: *Good reading with some incorrect information.*
  - 3: *Mixture of correct and incorrect information, but enough correct information to indicate that psi occurred.*
  - 2: *Some correct information, but not enough to suggest beyond chance that psi occurred.*
  - 1: *Little correct information.*
  - 0: *No correct information.*
- \*Psi is a general parapsychological term and includes telepathy, clairvoyance, and precognition as well as communication with the deceased.*

### Instrument

The Phenomenology of Consciousness Inventory (PCI; Pekala, 1991a) is a 53-item retrospective self-report questionnaire that quantifies 26 different dimensions of consciousness associated with a stimulus condition; instrument, scoring sheet, and instructions are available at [www.quantifyingconsciousness.com](http://www.quantifyingconsciousness.com). The PCI was developed based on the theorizing of Husserl, Batista, Tart, Krippner, Ludwig, and Silverman (reviewed in Pekala, 1991a, p. 91) and was revised through several pilot studies in order to address “the major contents of consciousness, and the processes or means by which these contents are ‘illuminated,’ cognized, [and/or] perceived . . . by consciousness” (Pekala, 1991a, p. 82).

Items in the PCI, organized in a randomized block design, ask the respondent to report using a Likert-like scale their level of agreement with either statement in a pair of opposing statements, for example, “My thinking was clear and understandable” to “My thinking was unclear and not easy to understand.” The resulting responses are

**Table 1** *Phenomenological Dimensions Quantified by the PCI*

<b>Positive Affect</b>	<b>Altered Experience</b>	<b>Attention</b>
Love	altered Body Image	Direction of Attention
Joy	altered Time Sense	Absorption
Sexual Excitement	altered Perception	<b>Self-awareness</b>
	altered Meaning	<b>Altered State of Awareness</b>
<b>Negative Affect</b>		<b>Internal Dialogue</b>
Anger	<b>Imagery</b>	<b>Rationality</b>
Sadness	Amount	<b>Volitional Control</b>
Fear	Vividness	<b>Memory</b>
		<b>Arousal</b>

*Note.* Major dimensions are left-justified and in bold.

quantified into a profile of the respondent's experiences or consciousness during the condition. In this respect, the PCI "is superior to independent rater analysis of narratives alone for the purpose of identifying distinctive phenomenological features of states of consciousness" (Wildman & McNamara, 2010, p. 248).

The dimensions quantified by the PCI are grouped into 12 major dimensions (positive affect, negative affect, altered experience, imagery, attention, self-awareness, altered state of awareness, internal dialogue, rationality, volitional control, memory, and arousal) and 14 minor dimensions (love, joy, sexual excitement; anger, sadness, fear; body image, time sense, perception, meaning; imagery amount, imagery vividness; and direction of attention, absorption); see Table 1. Of the 26 dimensions, 21 are independent; the other five—positive affect, negative affect, altered experience, imagery, and attention—are averages of subdimensions. Intensity scores on the PCI dimensions and subdimensions run from "none or little," coded a "0," to "much or complete," coded a "6."

The PCI also provides for the computation of a hypnoidal state score, which serves "as an estimate of Weitzenhoffer's conceptualization of 'trance'" (Pekala & Maurer, 2014, p. 104). The score is based on cross-validated regression analyses of the PCI in predicting total Harvard Group Scale scores using the unstandardized regression coefficient of 10 of the PCI (sub)dimensions. This score correlates about .60 with

the Harvard Group Scale (Forbes & Pekala, 1993; Pekala & Kumar, 1984, 1987). In the regression equation are the PCI (sub)dimensions indicating loss of volitional control and increases in the dimensions altered state, altered experiences, and absorption—subjective experiences that clinicians would expect to be altered during hypnotism with people who are highly hypnotizable (Pekala, 1991a).

The validity and reliability of the PCI (Pekala, 1991a) as well as its internal consistency (Pekala et al., 1986) have been previously demonstrated. The instrument includes five specific item pairs with reversed polarities to ensure the consistency of a participant's answers by providing a reliability index (RI); an RI score greater than 2.0 is considered unreliable (Pekala, 1991b). All PCIs in the current study had RI scores of 2.0 or less, indicating they were completed in a reliable and valid manner.

Researchers have previously used the PCI to study ostensible disincarnate communication (Rock & Beischel, 2008) and other psi phenomena (Rock & Storm, 2010) as well as hypnosis (Pekala et al., 2010a,b), meditation (Venkatesh et al., 1997), fire-walking (Hillig, & Holroyd, 1997/98; Pekala & Ersek, 1992/93), an out-of-body experience (OBE) within a near-death experience (NDE; Maitz & Pekala, 1991), religious/spiritual narratives (Wildman & McNamara, 2010), a virtual reality environment (Huang et al., 2000), and shamanic-like journeying (e.g., Rock et al., 2013) in addition to eating disorders, creativity, phobias, depression, antisocial feelings, kleptomania, and epilepsy (cited in Wildman & McNamara, 2010).

Each WCRM participant in this study completed the PCI at the start of the first session to provide a baseline regarding their experiences in the previous five minutes as well as immediately following each of the three study conditions regarding their experiences during those sessions, for a total of four PCIs per WCRM over the course of three weeks. The instructions to the mediums emphasized that they should not attempt to determine the status of the target in any reading and, rather, should just experience the information related to a target. They were told, "It is essential that you simply attempt to answer each question during the reading and then fill out the PCI about that experience." The WCRMs participated in this study between February 2012 and January 2013.

## Analyses

To address the primary hypothesis regarding differences in phenomenology scores between conditions, we compared the intensity scores of the 12 major and 14 minor PCI dimensions for a baseline condition and three randomized experimental conditions—reading for a deceased target, reading for a living target, and control. We performed a one-way repeated measures multivariate analysis of variance (MANOVA) on the means to help protect against inflating the Type 1 error rate in follow-up analysis of variance (ANOVA) tests.

To address the secondary hypothesis regarding correlations between accuracy reading scores and phenomenological dimensions, we used Pearson's correlation analyses.

To specifically address mediums' reports of experiencing psychic functioning differently than survival psi (e.g., Rock et al., 2009), we completed an additional analysis via a paired *t* test comparing only the phenomenology for the blinded readings for living targets versus the blinded readings for deceased targets for the PCI dimension of love.

For all analyses, we set statistical significance at an  $\alpha \leq .05$ . To assess practical significance, in the absence of norms for effect size in research of this type, we used Cohen's (1988) cautious specifications: for correlations,  $r \geq .10$  to indicate small,  $r \geq .30$  to indicate medium, and  $r \geq .50$  to indicate a large effect; for MANOVA, partial  $\eta^2 \geq .01$  to indicate small, partial  $\eta^2 \geq .06$  to indicate medium, and partial  $\eta^2 \geq .14$  to indicate a large effect.

## Results

### Impression of Target Status

During 19 of the 20 readings, the WCRM volunteered their impressions regarding the living or deceased status of the named target—as they normally would in a reading with a client. Although target status determination was not a focus of this study, we include the following result because of its noteworthiness. Despite WCRMs having been instructed that the target for each reading could be living or deceased and *not* that they would be reading one of each type of target, in a statistically significant proportion of cases (14/19, 74%; binomial probability, one-tailed,  $p = .03$ ), their impressions accurately reflected the target's status.

**Table 2** Overall Model Results for PCI Dimensions

<i>Positive Affect</i>	$F(3,39) = 1.73, p = .184$
Love	$F(3,39) = 2.39, p = .091$
Joy	$F(3,39) = 4.45, p = .012$
Sexual Excitement	$F(3,39) = 0.81, p = .501$
<b>Negative Affect</b>	$F(3,39) = 2.83, p = .057$
Anger	$F(3,39) = 1.70, p = .191$
Sadness	$F(3,39) = 2.77, p = .061$
Fear	$F(3,39) = 0.79, p = .510$
<b>Altered Experience</b>	$F(3,39) = 11.43, p < .001$
altered Body Image	$F(3,39) = 6.24, p = .002$
altered Time Sense	$F(3,39) = 29.76, p < .001$
altered Perception	$F(3,39) = 8.79, p < .001$
altered Meaning	$F(3,39) = 6.03, p = .003$
<b>Imagery</b>	$F(3,39) = 33.31, p < .001$
Amount	$F(3,39) = 46.60, p < .001$
Vividness	$F(3,39) = 13.47, p < .001$
<b>Attention</b>	$F(3,39) = 11.09, p < .001$
<b>Direction of Attention</b>	$F(3,39) = 11.03, p < .001$
Absorption	$F(3,39) = 0.69, p = .569$
<b>Self-awareness</b>	$F(3,39) = 6.86, p = .001$
<b>Altered State of Awareness</b>	$F(3,39) = 7.74, p = .001$
Internal Dialogue	$F(3,39) = 2.68, p = .067$
Rationality	$F(3,39) = 1.67, p = .198$
<b>Volitional Control</b>	$F(3,39) = 11.53, p < .001$
Memory	$F(3,39) = 0.44, p = .727$
Arousal	$F(3,39) = 0.54, p = .658$
<b>Hypnoidal State Scores</b>	$F(3,39) = 25.18, p < .001$

*Note.* PCI major (left justified) and minor dimensions and Hypnoidal State Scores between the four conditions (baseline, control, and readings for living or deceased targets). Dimensions and values in bold showed significant differences between groups (Bonferroni corrected  $\alpha = .002$ ).



## Primary Hypothesis: Phenomenology and Condition

We had hypothesized that mediums' PCI scores would differ significantly for different study conditions: readings for living and deceased targets and baseline and control conditions. In our initial analysis, a Shapiro-Wilk test showed that the data violated the assumptions of normality. To address this violation, we conducted a one-way repeated measures MANOVA on the ranked data using Munzel and Brunner's (2000) method implemented in R using the *mulrank()* function (Wilcox, 2005). Results showed a significant main effect between the major PCI dimensions ( $F[3, 11] = 4.35, p < .0001, \text{partial } \eta^2 = .54$ ) and between the minor PCI dimensions ( $F[3, 13] = 5.31, p < .0001, \text{partial } \eta^2 = .55$ ). Because significant MANOVA findings were demonstrated, we conducted Bonferroni corrected repeated measures analysis of variance (ANOVA) comparisons.

Table 2 demonstrates the overall model results from the repeated measures ANOVA. Significant (Bonferroni corrected  $\alpha = .002$ ) differences between conditions were seen regarding the dimensions altered experience, altered body image, altered time sense, altered perception, imagery, imagery amount, imagery vividness, attention, direction of attention, self-awareness, altered state of awareness, and volitional control as well as for hypnoidal state score.

Table 3 includes the means and standard deviations for each PCI dimension (scale: 0–6) and the hypnoidal state score (scale: 1–9+) for each condition. Statistically significant contrasts are listed. The relationships between the PCI intensity scores during the four conditions—three reading conditions plus baseline—for the major and minor dimensions are displayed as radar graphs in Figures 1 and 2, respectively.

A comparison of the hypnoidal state scores for each of the four conditions is illustrated in Figure 3. Hypnoidal state scores for the living and deceased target readings were significantly higher than for the baseline and control conditions, but not significantly different from each other (Table 3).

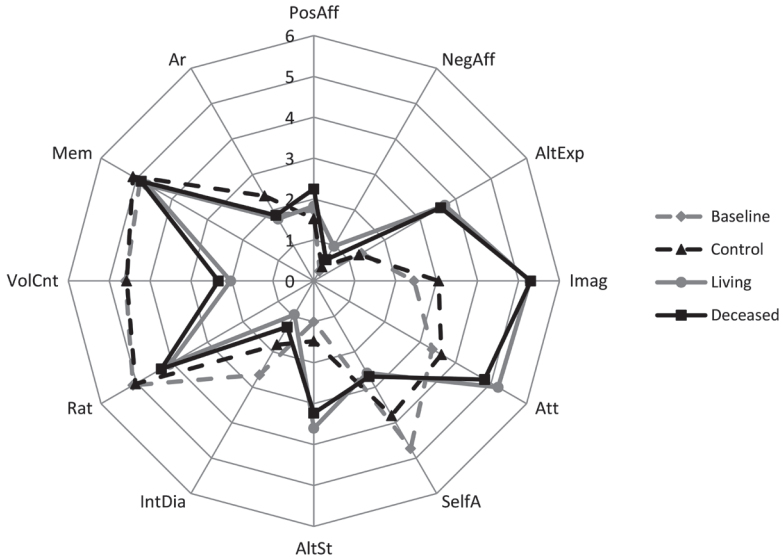
**Table 3** Means, SD, and Contrasts for PCI Dimensions

	<b>1: Baseline</b>		<b>2: Control</b>		<b>3: Living Target</b>		<b>4: Deceased Target</b>		<b>Contrasts</b>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
<b>Positive Affect</b>	1.73	0.81	1.52	0.95	1.83	0.99	2.25	0.48	
Love	3.30	0.79	2.90	1.31	2.75	1.18	3.65	0.63	
Joy	1.45	1.09	1.05	1.09	2.20	1.81	2.85	1.25	
Sexual Excitement	0.45	0.86	0.60	0.81	0.25	0.54	0.25	0.49	
<b>Negative Affect</b>	0.28	0.31	0.40	0.68	0.98	1.10	0.60	0.84	
Anger	0.30	0.54	0.20	0.63	0.85	1.51	0.40	0.66	
Sadness	0.50	0.71	0.75	1.01	1.75	1.80	1.20	1.55	
Fear	0.05	0.16	0.25	0.64	0.35	0.53	0.20	0.42	
<b>Altered Experience</b>	1.35	1.61	1.28	1.35	3.70	0.68	3.58	0.96	1,3; 2,3
Body Image	1.97	1.79	1.53	1.57	4.07	1.41	3.73	2.00	2,3
Time Sense	1.03	1.52	1.27	1.27	4.53	1.10	4.70	0.84	1,3; 1,4; 2,3; 2,4
Perception	0.97	1.59	1.23	1.43	3.17	0.91	2.87	1.20	1,3; 2,3
Meaning	1.40	1.88	1.13	1.58	3.20	1.31	3.15	1.23	
<b>Imagery</b>	2.45	0.71	3.05	1.42	5.28	0.61	5.30	0.67	1,3; 1,4; 2,3; 2,4
Amount	1.60	1.10	2.80	1.64	5.70	0.42	5.55	0.60	1,3; 1,4; 2,3; 2,4
Vividness	3.30	0.54	3.30	1.30	4.85	0.94	5.05	0.86	1,3; 1,4; 2,4

	<b>1: Baseline</b>		<b>2: Control</b>		<b>3: Living Target</b>		<b>4: Deceased Target</b>		<b>Contrasts</b>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
<b>Attention</b>	3.34	0.91	3.60	0.82	5.20	0.93	4.82	1.07	1,3; 2,3
Direction	2.30	1.30	2.70	1.72	4.97	1.41	4.73	1.29	1,3; 1,4; 2,3; 2,4
Absorption	4.90	1.66	4.95	1.21	5.55	0.64	4.95	1.09	
<b>Self- awareness</b>	4.73	0.89	3.80	1.56	2.60	1.75	2.70	1.56	1,3; 1,4
<b>Altered State</b>	1.00	1.55	1.47	1.35	3.60	1.64	3.23	1.74	1,3; 2,3
<b>Internal Dialogue</b>	2.65	2.20	1.80	2.50	0.95	1.01	1.30	1.40	
<b>Rationality</b>	5.10	1.10	5.03	1.22	4.07	1.60	4.30	1.39	
<b>Volitional Control</b>	4.60	0.84	4.57	1.51	2.03	1.39	2.33	1.41	1,3; 1,4; 2,3
<b>Memory</b>	4.90	1.25	5.10	0.72	4.70	1.29	4.87	1.21	
<b>Arousal</b>	1.85	1.25	2.40	2.09	1.75	1.70	1.85	1.62	
HSS	3.85	0.92	4.35	1.40	7.18	0.70	6.84	1.53	1,3; 1,4; 2,3; 2,4

*Note:* Means, standard deviations (*SD*), and contrasts for PCI major (bold and left-justified) and minor dimensions (scale: 0-6) and hypnoidal state scores (HSS; scale: 1-9+) for baseline, control, blinded reading for a living target and blinded reading for a deceased target conditions. Listed contrasts are significant (Bonferroni corrected for multiple comparisons).

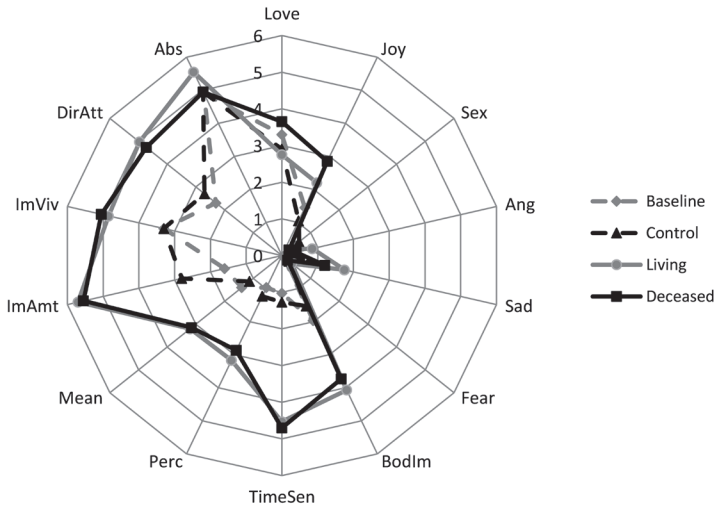
**Figure 1 PCI Major Dimension Ratings**



*Note.* Phenomenology of Consciousness Inventory (PCI) average major dimension ratings by 10 participants under four conditions: baseline, control condition in which no psi abilities were used, a blinded reading for a living target, and a blinded reading for a deceased target.

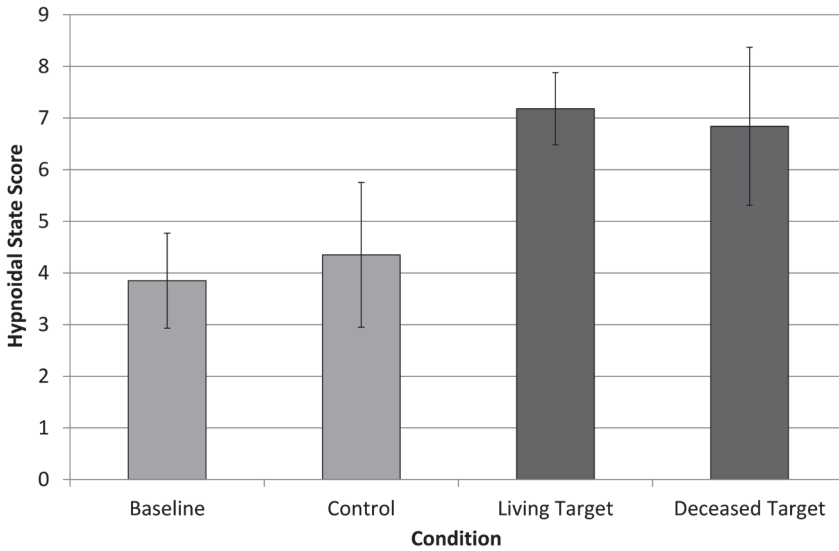
Abbreviations: PosAff = positive affect; NegAff = negative affect; AltExp = altered experience; Imag = imagery; Att = attention; SelfA = self-awareness; AltSt = altered state of awareness; IntDia = internal dialogue; Rat = rationality; VolCnt = volitional control; M = memory; Ar = physical arousal (i.e., subjective tension).

**Figure 2 PCI Minor Dimension Ratings**



*Note.* Phenomenology of Consciousness Inventory (PCI) average minor dimension ratings by 10 participants under four conditions: baseline, control condition in which no psi abilities were used, a blinded reading for a living target, and a blinded reading for a deceased target.

Abbreviations: Sex = sexual excitement; Ang = anger; Sad = sadness; BodIm = body image; TimeSen = time sense; Perc = perception; Mean = meaning; ImAmt = imagery amount; ImViv = imagery vividness; Direction = direction of attention; Abs = absorption.

**Figure 3** *Hypnoidal State Scores*

*Note.* Comparison of Hypnoidal State Scores (1.00-3.00: non-hypnoidal state; 3.01-5.00: mild hypnoidal state; 5.01-7.00: moderate hypnoidal state; 7.01-9+: high hypnoidal state) for the four study conditions (baseline, control, blinded reading for a living target, blinded reading for a deceased target; mean  $\pm$  *SD*).

### ***Living Target Readings***

A comparison of the WCRMs' PCI dimension scores from the *baseline* condition and their scores from the *living target* reading condition demonstrated significantly *higher* scores related to the reading for altered experience, altered time sense, altered perception, imagery, imagery amount, imagery vividness, attention, direction of attention, and altered state of awareness and significantly *lower* scores related to the reading for self-awareness and volitional control.

Similarly, a comparison of the WCRMs' PCI dimension scores from the *control* condition and their scores from the *living target* reading condition demonstrated significantly *higher* scores related to the reading for altered experience, altered body image, altered time sense, altered perception, imagery, imagery amount, attention, direction of attention, and altered state of awareness and significantly *lower* scores related to the reading for volitional control.

### *Deceased Target Readings*

A comparison of the WCRMs' PCI dimension scores from the *baseline* condition and their scores from the *deceased target* reading condition demonstrated significantly *higher* scores related to the reading for altered time sense, imagery, imagery amount, imagery vividness, and direction of attention and significantly *lower* scores related to the reading for self-awareness and volitional control.

A comparison of the WCRMs' PCI dimension scores from the *control* condition and their scores from the *deceased target* reading condition demonstrated significantly *higher* scores related to the reading for altered time sense, imagery, imagery amount, imagery vividness, and direction of attention.

### **Secondary Hypothesis: Correlations with Accuracy**

We had hypothesized that phenomenology as reflected in PCI scores would correlate positively with accuracy scores related to both reading conditions. After multiple attempts at contacting participant raters, three of their single-digit global scores were never provided. Due to the small *ns* for the following two conditions, we retained an alpha of .05 for the analyses. Because the correlation between PCI variables and accuracy scores is potentially meaningful, we wanted such relationships to be liberally assessed.

Of the 10 readings for deceased targets, sitters returned nine global accuracy scores ( $3.22 \pm 1.56$ ; scale: 0–6). The correlation between the accuracy of readings for deceased targets and positive affect was positive but did not achieve significance ( $r[7] = 0.66, p = .054$ ). However, the analysis yielded no correlations between the accuracy of readings for deceased targets and the dimensions negative affect, altered state of awareness, volitional control, or memory.

For the 10 readings for living targets, PRRRs returned eight scores ( $2.38 \pm 1.51$ ). The accuracy of readings for living targets was significantly negatively correlated with imagery vividness ( $r[6] = -0.76, p = .027$ ) and absorption ( $r[6] = -0.74, p = .037$ ); the negative correlation with imagery did not achieve significance ( $r[6] = -0.69, p = .056$ ). However, according to Cohen (1988), an *r* of  $\pm .69$  can be considered a large effect. Thus, as WCRMs' reported imagery vividness, absorption, and possibly imagery overall decreased, their reading accuracy increased.

### Tertiary Hypothesis: Love Comparisons

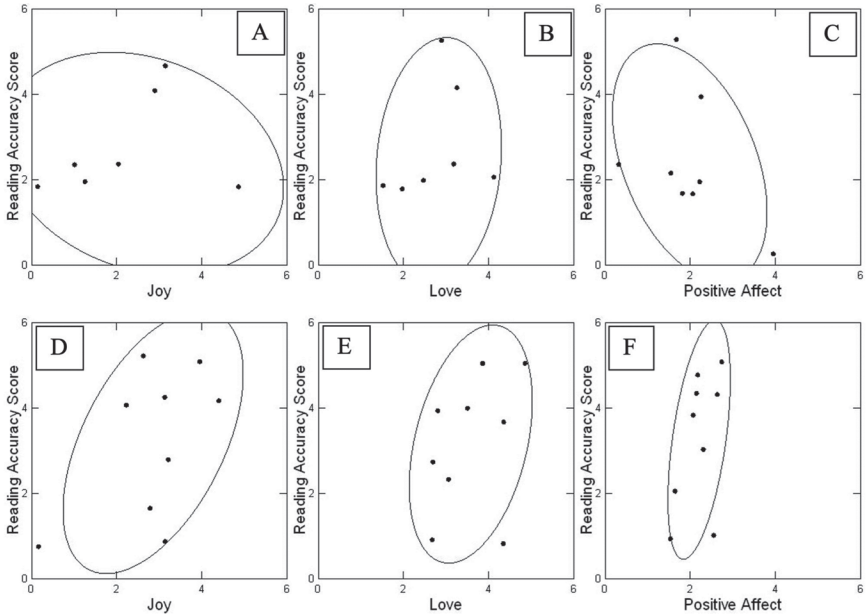
We had hypothesized that participants would experience love to a greater degree during readings for deceased targets compared to readings for living targets. A comparison of the WCRMs' scores for the PCI dimension of love for the two reading conditions demonstrated a difference. The love scores related to readings for deceased targets ( $3.65 \pm 0.63$ ) were significantly higher than were scores related to readings for living targets ( $2.75 \pm 1.18$ ;  $t[9] = 2.78$ ,  $p = .02$  [paired  $t$  test, two-tailed]).

Finally, we assessed whether the relationship between participants' experiences of love and their accuracy was stronger during readings for deceased targets compared to readings for living targets. We also evaluated joy and positive affect in this regard. First, we report the correlations. The accuracy of readings for deceased targets was not significantly correlated with love ( $r[7] = 0.46$ ,  $p = .208$ ), joy ( $r[7] = 0.52$ ,  $p = .152$ ), or positive affect ( $r[7] = 0.66$ ,  $p = .054$ ). However, according to Cohen (1988), an  $r$  of .46 is a medium-to-large effect, and an  $r$  of .52 and .66 can be considered large effects. The accuracy of readings for living targets was not significantly correlated with love ( $r[6] = 0.19$ ,  $p = .724$ ), joy ( $r[6] = -0.19$ ,  $p = .491$ ), or positive affect ( $r[6] = -0.35$ ,  $p = .054$ ). According to Cohen (1988), an  $r$  of .19 is a small-to-medium effect, and an  $r$  of .35 can be considered a medium effect. In any event, the correlation results should be viewed in light of the following caveat generated by the analysis software output: "insufficient degrees of freedom for global significance test; individual significance tests are suspect;" that is, the  $n$  for each group was small and, consequently, the results should be interpreted with caution.

To evaluate differences in strength of correlations between the deceased target condition and the living target condition, we used Fisher  $r$ -to- $z$  transformations. The correlations were not significantly different for the deceased target condition compared to the living target condition for love and accuracy ( $z = 0.52$ ,  $p = .301$  [one-tailed]), and joy and accuracy ( $z = 1.27$ ,  $p = .102$  [one-tailed]). However, the correlations were significantly different for positive affect and accuracy ( $z = 1.92$ ,  $p = .027$  [one-tailed]). Figure 4 depicts the correlations between the accuracy of living target readings and participants' scores for the PCI dimensions of joy, love, and positive affect during those readings and how they differ from the correlations between the accuracy of readings for deceased targets and the same dimensions of joy, love, and positive affect.



**Figure 4** Relationships Between Accuracy and PCI Dimensions for Different Reading Targets



*Note.* Scatter plots depicting the relationships between the accuracy of blinded readings for living targets and joy (A), love (B), and positive affect (C) and the relationships between the accuracy of blinded readings for deceased targets and joy (D), love (E), and positive affect (F).

## Discussion

In this study, we analyzed mental processes and contents to gain a reliable and valid “snapshot” of the participant’s phenomenology in response to short stimulus conditions. Tying subjective experience to well-defined conditions provides a means to reliably and validly quantify the mind in a way heretofore unavailable. “Having a technology to quantify the mind can not only help us in better understanding this most subjective of phenomena, but help decipher its relationship” to various conditions and states of awareness (Pekala, 2015, p. 418).

Specifically, the data reported here provide novel quantitative empirical evidence collected under blinded, randomized, and counterbalanced conditions assessing credentialed research mediums’ experiences of psychic readings for living targets and readings for deceased targets ostensibly involving survival psi. In a statistically significant

portion of the blinded readings in this study, the WCRM participants were able to accurately determine the status—living or deceased—of the target based on their experiences during the readings. More specific findings are discussed below.

### **Psychic Functioning vs. Mediumship**

As would be expected based on previous research (Rock et al., 2009) and the potential overlap regarding any experience acquiring non-sensory, non-local information about other people, we found many similarities between the two psi experiences examined in this study. The PCI is based on the principle of specificity, meaning that similar stimulus conditions will be associated with similar phenomenological aspects and different stimulus conditions will be associated with different phenomenological aspects.

This principle is graphically illustrated by Figures 1 and 2, in which the WCRMs' PCI scores for the psi readings for living and deceased targets appear similar and the scores for the non-psi baseline and control conditions appear similar but the two psi readings appear different from the two non-psi conditions. Specifically, when all four conditions were compared, WCRMs' PCI intensity scores for the dimensions altered time sense, imagery, imagery amount, imagery vividness, and direction of attention, and the hypnoidal state scores were significantly higher for the psi readings than for the non-psi conditions.

Regarding the altered sense of time PCI dimension, items asked about the participant's "perception of the flow of time," any changes in its rate of passage (i.e., time "seemed to greatly speed up or slow down"), and any "sense of timelessness" (i.e., time "stood still; there was no movement of time at all"). The finding of significantly higher than baseline/control alterations in time sense for both psi reading conditions reflects the experimenter (JB)'s experience of some of the participants being regularly surprised during research that the time allotted for a given research reading had expired. This finding was consistent with previous research in which a comparison of phenomenology during readings for deceased targets versus a control condition demonstrated alterations in time sense during the readings (Rock & Beischel, 2008).

PCI items related to the amount of visual imagery participants experienced (e.g., "no or very few images," "a great deal of visual imagery," "my experience was made up almost completely of images") and its quality (e.g., "my visual imagery was so vivid and three-

dimensional, it seemed real”) reflect the major dimension imagery and its minor subdimensions amount and vividness. A heightened experience of visual imagery seems fundamental to both psychic functioning and survival psi experiences. Previous qualitative and quantitative research also found that visual imagery was reported as an essential component in both psychic and mediumship readings (Beischel et al., 2017; Rock et al., 2009) and in ganzfeld experiences (Wackermann et al., 2008).

Concerning the major dimension of attention, the PCI assesses two subdimensions: absorption (how intensely involved in the object of attention the participant is) and direction (if the participant’s attention is directed inward toward their subjective experience or outward toward the environment or the world around them). In this study, the WCRMs received direction of attention scores for the two psi reading conditions that were significantly higher than for the two non-psi baseline and control conditions, indicating that their attention was directed inward toward their own internal, subjective experiences during the readings. This finding is consistent with previous research in which a comparison of readings for deceased targets versus a control condition indicated a similar alteration in direction of attention (Rock & Beischel, 2008).

For the PCI dimensions of self-awareness and volitional control, when we compared all four conditions, WCRMs received scores for these dimensions for each of the psi reading conditions that were significantly *lower* than for the non-psi baseline condition.

Regarding the major dimension of self-awareness, the PCI assesses the intensity of the participant’s awareness “of being aware of myself,” including items about being “conscious and well aware of myself” or maintaining “a very strong sense of self-awareness the whole time” vs. not maintaining or losing that sense or “consciousness of myself” or not being “aware of being aware of myself at all.” For both psi reading conditions, WCRMs received self-awareness scores lower, but not significantly so, than for the non-psi control condition and significantly lower than for the non-psi baseline condition. This finding is consistent with previous research in which medium participants received significantly lower self-awareness scores for readings for deceased targets than for a control condition in which they responded to questions about a living person known to them (Rock & Beischel, 2008).

For the volitional control PCI dimension, the related items measure the experience of having “control over what I was paying attention to.” They contrast the statements “The thoughts or images I had

were under my control; I decided what I thought or imagined” with “Images and thoughts popped into my mind without my control” as well as “I relinquished control and became receptive and passive to what I was experiencing” with “I was willfully controlling what I was experiencing.” The participants’ volitional control PCI scores in this study reflect that they experienced significantly less control over their phenomenology in both of the psi reading conditions compared to the non-psi baseline and control conditions; this difference achieved significance when the control condition was compared to readings for living targets. Similar to the self-awareness data, findings of lower volitional control in both of the psi conditions address the phenomenology of losing one’s sense or control of self. The finding of lower volitional control was consistent with a previous finding comparing that dimension for participants’ readings for deceased targets to a control condition (Rock & Beischel, 2008).

These similarities of PCI intensity scores between the two psi reading conditions for the dimensions of altered time sense, imagery, imagery amount, imagery vividness, direction of attention, self-awareness, and volitional control are most likely reflective of the overall phenomenology of perceiving non-local, extrasensory information; these findings may quantify the phenomenological dimensions of consciousness associated with psi in general. In addition, participants in this study did not receive significantly different scores between the four conditions with regard to the major PCI dimensions of positive affect, negative affect, internal dialogue, rationality, memory, or arousal (subjective tension), implying that these dimensions may not be associated with the phenomenology of receiving or retrieving psi information.

Some findings from this study were inconsistent with findings from previous research. For example, in a previous study comparing PCI scores from certified mediums’ readings for deceased targets to their scores from a control condition (Rock & Beischel, 2008;  $N = 7$ ), their altered experience, altered state of awareness, body image, perception, meaning, and memory scores were significantly different in the two conditions, none of which were present in the current study ( $N = 10$ ). In addition, whereas a correlation between accuracy and self-awareness was found in previous research (Rock et al., 2014), no such correlation was found in this study. These differences indicate that variations in experiences may be related to differences in the specific individual targets or other target variables or that these experiences are simply varied across sessions even for individual participants. Similarly, target- or session-related differences in participants’ phenomenology

may be responsible for seemingly contradicting data between studies, sessions, and/or participants.

The collection of hypnoidal state scores (HSS) “allow one to obtain an estimate of the phenomenological parameters associated with what subjects of varying hypnotic susceptibility would report during hypnosis;” that is, a high HSS represents “the phenomenological experience typical of highly susceptible individuals during hypnosis” (Pekala, 1991a, p. 320). HSS are calculated from the PCI dimensions altered experience, altered body image, altered time sense, absorption, self-awareness, altered state of awareness, internal dialogue, rationality, volitional control, and memory scores and categorized as 1.00–3.00: non-hypnoidal state; 3.01–5.00: mild hypnoidal state; 5.01–7.00: moderate hypnoidal state; 7.01–9+: high hypnoidal state.

The HSS findings in this study for readings for living and deceased targets ( $7.18 \pm 0.70$  and  $6.84 \pm 1.53$ , respectively; Fig. 3) reflect that the WCRMs experienced moderate to high hypnoidal state changes in phenomenology and were deeper in trance during both psi conditions than in the two non-psi conditions. According to Pekala and Nagler (1989), an HSS of 7.00 and above, as tended to characterize participants in this study, reflect a “high hypnoidal state” consistent with what high hypnotizables would report during hypnosis. Future researchers may wish to further address this issue—specifically, whether mediums are “high hypnotizables” and are using self-hypnosis or trance strategies during readings.

Finally, in this study we found an important difference between data collected following living target psychic functioning readings and deceased target mediumship readings. When only the two psi conditions were compared, WCRMs received higher scores for the PCI dimension of love related to the deceased target versus the living target condition. Although a Type 1 error cannot be ruled out, this result supports the anecdotal reports and qualitative data concerning the importance of this particular emotion as it relates to differences in phenomenology across these two conditions. In one previous study, thematic analysis of mediums’ accounts of the survival psi experience included the theme “partial ‘merging’ with the discarnate” (Rock et al., 2009, p. 81) which one participant explained this way: “The feelings of the discarnate may be sensed and felt by the medium such as a deep feeling of love” (p. 81). Future researchers may wish to examine the PCI dimension of love during readings in which sitters rather than an experimenter serving as a proxy sitter are involved in the reading in real-time.

## Phenomenology and Accuracy

As previously stated, of the 10 readings for deceased targets, sitters returned nine global accuracy scores ( $3.22 \pm 1.56$ ; scale: 0–6). Although these scores are similar to the global accuracy scores from previous research performed under blinded conditions (Beischel et al., 2015), we again recommend that these accuracy results are unsuitable for inclusion in future meta-analyses regarding the accuracy of mediums due to the lack of experimental blinding of the raters in the current study.

The accuracy of readings for living targets was significantly negatively correlated to imagery vividness ( $r[6] = -0.76, p = .027$ ) and absorption ( $r[6] = -0.74, p = .037$ ). That is, in this sample, the less the participants reported vivid visual mental imagery and involvement in the object of attention, the higher their accuracy scores were. These findings may support the model that, as is the case in the ganzfeld procedure, noise reduction is more psi-conducive in this context of regulated research readings than the production of cognitive activity, which has been theorized to be more psi-conducive in a shamanic-like journeying context where imagery cultivation is coupled with listening to monotonous drumming (Storm & Rock, 2009).

Figure 4 illustrates positive relationships between reading accuracy and mediums' feelings of joy, love, and positive affect. The correlations, however, were not significantly different for the deceased target condition compared to the living target condition for love and accuracy or joy and accuracy. However, these non-significant results may be an artifact of a small sample size. Importantly, the correlations were significantly different between the deceased target condition and the living target condition for positive affect and accuracy. Interestingly, the  $r$  obtained for the correlation between positive affect and accuracy in the deceased target condition was in the positive direction (i.e., .66), but negative for the living target condition (i.e.,  $-.35$ ). Therefore, the potential causal question remains for future researchers to explore: Does performing a more accurate reading imbue medium-discarnate communication with more positive affect, or does the presence of positive affect somehow signal or create more accurate readings?

Consistent with previous research (Rock et al., 2014), our analysis yielded no significant correlations between the accuracy of readings for deceased targets and the dimensions negative affect, altered state of awareness, volitional control, or memory.

## Study Limitations

In this section, we discuss several limitations involved in our study.

One limitation is related to sample size. The significant results from this study may be indicative of actual phenomenological components of psi as well as of differences between psychic functioning during readings for living targets and survival psi during readings for deceased targets. However, because of the small  $N$  in this study, these results should not be considered conclusive. It remains for future researchers to discover whether a larger sample size produces different, similar, or even more robust findings.

The PCI, as we have previously noted, “may not measure various phenomenological variables that are fundamental constituents of mediumistic states” and “a self-report measure designed specifically to quantify the phenomenology of mediumship” may be required (Rock et al., 2014, p. 190). Similarly, the PCI may not be able to effectively capture nuances in the phenomenology of survival psi in order to differentiate that experience from the one related to psychic functioning. For example, previous qualitative research (Beischel et al., 2017; Rock et al., 2009) has demonstrated that both mediumistic and psychic readings may include mental experiences of multiple sensory modalities—visual, auditory, tactile, olfactory—whereas the PCI can capture changes only in visual imagery.

However, it seems that the PCI has the potential to serve as an easy and practical instrument in quantitatively capturing phenomenological aspects of many anomalous mental phenomena and comparing them. Just as assessment tools such as functional magnetic resonance imaging (fMRI) and single-photon emission computed tomography (SPECT) may quantify changes in the brain, the PCI is able to quantify changes in the mind, an equally complex system (e.g., Pekala & Creegan, 2020).

Another limitation involved targets' ages. To dissuade deceased drop-in communicators during living target readings in this study, we utilized living targets (i.e., PRRRs) whose close family and friends were all still living. A PRRR population with this requirement is often primarily young in age, which is not usually the case for deceased targets. This difference in target pools may be responsible for at least some of the phenomenological effects seen. Future researchers may wish to standardize target ages and/or forego the requirement that PRRRs have no associated discarnates.

The control condition we used in this study involved some limita-



tions. In that condition, each WCRM participant heard the experimenter read aloud a description of a person to use as their source of the information to respond to questions about the target discarnate. Although this control condition mimicked the timing, structure, and tasks involved in the psi reading conditions, by including only auditory stimuli, it did not mimic the multi-modal nature of the information the WCRMs reportedly experienced during psi readings.

Blinding and source comprised an additional limitation. Having given sitters and PRRRs only one reading to score and not having blinded them that the reading was intended for them, we may have created demand characteristics that influenced their scoring.

A possible limitation is that having given the target's first name to a medium participant at the start of each reading may have provided information about the target's living or deceased status. However, this does not seem to be the case. The mediums were instructed that each reading could be for a living or a deceased target, and they were given the name of the second target only after the first reading had taken place, the PCI for that condition had been completed, and at least a week had passed. In addition, we observed that the names themselves did not seem to reflect generational differences that might have cued that an older generation target might more likely be deceased; for example, living/deceased target pairs included Michael/Jack, James/Bill, and Leann/Debbie.

In addition, it may be possible that phenomenological differences between blinded living target readings and blinded deceased target readings result not from differences in the sources of the information—that is, living vs. deceased targets—but from the acquisition of non-local information regarding which targets are which; that is, that the participants may have used psychic functioning to determine the status of a target—even a deceased one—and then completed the PCI based on that information. Indeed, we have heard descriptions of self-identified “mediums” who, for the benefit of the sitter, ostensibly access information from a psychic reservoir and fraudulently “dramatize” readings to imply the experiences represented, instead, communication from discarnates. The ruse may even be subconscious: An explanation has been proposed

that the medium is not consciously deceiving the sitters, but is rather subconsciously dramatizing the communications. The idea is that the medium... is essentially telling the grief-stricken sitters what they want to hear, but may not even be aware of the charade herself. (Carter, 2012, p. 153)

However, unwarranted assumptions and accusations such as these are not useful when drawing conclusions from quantitative empirical evidence collected under blinded, randomized, and counterbalanced conditions.

## Conclusion

Overall, the novel quantitative evidence collected during this study may reflect the general phenomenology of psi and adds to the empirical comparisons of psychic functioning during readings for living targets and survival psi experiences during readings for deceased targets. By quantifying the phenomenology of the medium in a reliable and valid manner via the PCI, we believe the consciousness researcher has a powerful methodology not only to determine nuances in subjective experiences associated with psi phenomena across various conditions but also to statistically compare such experiences in a rigorous, objective, and scientific manner.

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