Journal of the Society for Psychical Research, 2026
Vol. 90, No. 4, 252–278
https://doi.org/10.63499/8rgk1w36
www.spr.ac.uk

THE GHOST BRUSH INSTALLATION: A CASE-CENTERED PRIMER ON PSYCHOLOGICAL CONTAGION EFFECTS

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ABSTRACT

An official-looking cemetery sign paired with a nearby shoe brush—an art installation playfully warning visitors about "giving ghosts a free ride"—offers a compact, real-world prompt that vividly demonstrates the recently developed cascading-resonance model (CRM) of psychological contagion, the process by which thoughts or behaviors can amplify and spread across people like a 'virus.' This novel framework synthesizes emotional, cognitive, and behavioral mechanisms into a three-layer process: (a) input (suggestibility, expectancy priors, ritual affordance), (b) synchronization (attention convergence, mimicry/entrainment, social appraisal), and (c) scaling (prestige cueing, network feedback, and threshold dynamics). By mapping the features of this art installation against the CRM's nine core mechanisms, it is illustrated how contagion effects in paranormal-related contexts can emerge and intensify without invoking transmissible supernatural agents. This conceptual exercise thus offers parapsychologists and amateur investigators a mechanism-rich alternative to metaphysical interpretations, showing that clustered or transient perceptions of anomalous phenomena often reflect cascading resonance rather than evidence of external forces.

Introduction

So-called 'paranormal contagion' and the 'hitchhiker effect' are hot-button topics within certain investigative communities. These terms refer to anomalous events at a specific 'hotspot' that purportedly follow witnesses or investigators after they leave the location (e.g., Knapp & Kelleher, 2005; McCue, 2022; Ritson, 2021). In other words, instead of remaining confined to the original location, phenomena such as ghosts, poltergeist disturbances, unidentified aerial phenomena, or cryptid encounters (i.e., animals whose existence is claimed but unverified) may follow witnesses home or manifest in entirely new places—at times even involving their friends or family members. But contagion can also describe episodic spikes in 'paranormal' activity at certain times or places. For instance, Houran et al.'s (2026a) survey found that both professional and amateur researchers often experience a surge of strange and disruptive events while writing about paranormal topics—anomalies reliably showing a hierarchical pattern that the study described as a 'trickster chain' (p. 1). This

suggests that contagion-type effects can escalate in diversity and strength over time akin to a 'seed-to-burst' trajectory, i.e., where a small initiating event (the seed) spreads through a network or population, gradually amplifying until it reaches a tipping point that activates rapid, widespread adoption, reaction, or collapse (the burst).

Contagious processes have long been implicated in ghosts, hauntings, and poltergeists (i.e., 'ghostly episodes') and kindred phenomena (e.g., Bauer, 1989; Kerner, 1836; Lange & Houran, 2001; Laythe et al., 2017; Nisbet, 1979; Playfair, 1980). However, perceptions that 'cluster or snowball' within or across individuals often can be parsimoniously explained via cognitive mechanisms such as suggestion effects or fear responses as opposed to transmissible supernatural agents. In particular, *psychological contagion* (PC) offers a multilevel social-cognitive account of how emotions, cognitions, perceptions, or behaviors can amplify, synchronize, and spread through social networks (e.g., Chartrand & Bargh, 1999; Christakis & Fowler, 2013; Friston, 2005; Hatfield et al., 1993). The novel cascading-resonance model (CRM) of PC synthesizes these literatures into a processual framework involving nine core mechanisms that move from individual susceptibility to interpersonal alignment and then to network scaling (Houran et al., 2025).

In particular, CRM describes contagion as a three-layer architecture operating across micro-, meso-, and macro-levels of analysis. At the *micro-level*, dispositional factors such as suggestibility and boundary thinness, in combination with automatic mimicry and expectancy effects, lower an individual's threshold for social influence and produce internal mirroring of another's affective or behavioral state. When multiple individuals undergo similar resonance within a shared temporal, spatial, or digital context, attention alignment, neural entrainment, and social appraisal processes confer collective meaning on converging private states, driving a transition to interpersonal synchronization at the *meso-level*. Should this synchronization be sustained, network amplifiers, moral framing, and self-reinforcing feedback dynamics push the system past nonlinear tipping points into population-wide psychological states at the *macro-level*. Critically, the model treats these layers not as discrete phenomena but as a recursive, integrated system in which macro-level signals can back-propagate to alter individual receptivity while micro-level processes aggregate upward into collective outcomes. Suggestibility functions as a cross-domain substrate linking all three layers, and the framework yields specific, testable intervention points—including disruption of attention synchronization, dampening of algorithmic amplification, and reduction of moralized framing—at each level of the cascade.

While CRM offers a comprehensive framework for understanding contagion dynamics, its practical utility for field investigators has yet to be illustrated. This case-centered primer therefore serves as a translational bridge—demonstrating how the CRM's constituent mechanisms manifest *in situ* and

how they can inform evidence-based field protocols, thereby moving from metaphor to mechanism. Indeed, some parapsychologists and especially citizen scientists or amateur field investigators (Hill et al., 2019) may be unaware of either the key PC literature that is integrated within the CRM framework or its application to real-world contexts. Therefore, this paper uses a single, richly featured artifact (i.e., the 'cemetery ghost brush' art installation)—which is analogous to observational research on poltergeists, haunted houses, and other spectral-related phenomena, including paranormal tourism, Ouija board use, visits to mediums, and similar ritual practices (see Houran et al., in press)—to compress the theoretical ingredients of CRM into an accessible focal stimulus for educational purposes. The conceptual mapping of this installation against nine core mechanisms shows how it can function as an instigator for PC, which is intended to support interpretive clarity in parapsychological reasoning. This examination does not negate the possibility of parapsychological influences in some contagion-type spontaneous cases, but it instead prioritizes the need to assess for standard mechanisms before considering unorthodox influences or agencies (cf. Houran et al., 2026b).

The Ghost Brush installation: A stimulus with powerful potential

Figure 1 shows a cemetery sign directing visitors to "Wipe your feet" and to "Please use ghost brush before leaving the cemetery." Portland artist Ryan Iverson conceived *The Ghost Brush* as a playful outdoor art installation (though not expressly disclosed as such on the sign itself) at Lone Fir Pioneer Cemetery in Portland, Oregon (New Awesome, n.d.). He took inspiration from the shoe-cleaning brushes found at trailheads—used to prevent the spread of invasive plants—and reimagined them as a way to 'wipe off' lingering spirits before leaving the grounds, preserving the boundary between the living and dead. This idea further parallels the popular concept of 'spirit clearing. cleaning, or cleansing,' i.e., a metaphysical practice involving prayer, meditation, or other symbolic acts aimed at removing negative energies, emotional burdens, or spiritual impurities within an individual or location (e.g., Storm & Tilley, 2020). Therefore, the installation exemplifies the kinds of contextual variables—official-style signage, ritual affordances, and narrative framing—that often influence perceptual and attitudinal readiness to suggestions of the paranormal.

For example, Lange et al. (1996) highlighted how environmental prompts like signage or other embedded cues can powerfully shape the onset or contents of ghostly experiences. In their analysis of one hundred and twenty-seven spontaneous haunt reports from a commercial book series, they found that *demand characteristics* (direct or indirect suggestions of paranormal activity through folklore, rumors, or advertising) appeared in 61.6% of cases, while *embedded cues* (sensory or contextual hints such as matching scents and colors) were noted in 26.2% of cases (Lange et al., 1996, p. 758). Note that such patterns also extend to other types of entity encounter experiences (Houran, 2000). The

Figure 1. Cemetery art installation instructing visitors to "Please use ghost brush." The sign concentrates attention and supplies a supernatural interpretive script that can seed expectancy, ritual enactment, and social transmission—key components of the CRM (Houran et al., 2025) of PC.

cemetery ghost brush nonetheless embodies both contextual variables, i.e., it implies that spirits can cling to visitors' shoes and frames them as 'brushable' or tangible residue, which primes perceptual expectations. As a result, Iverson's installation operates as a live demonstration of how contextual variables such as expectancy-suggestion effects can stoke or perpetuate anomalous experiences (cf., Lange & Houran, 1997; Simmonds-Moore et al., 2017; Wiseman et al.,

Figure 2. Liability disclaimer as paranormal cue at Bobby Mackey's Music World, Wilder, Kentucky. The prominently displayed warning sign cautions patrons that the establishment is "purported to be haunted," and disclaims legal responsibility for any ghostly activity. The formal tone and institutional styling function as prestige and credibility cues, potentially activating PC mechanisms such as expectancy framing, social appraisal, and moralization. Positioned alongside media clippings, the sign reinforces the venue's haunted reputation and primes interpretive resonance among visitors.

2003). This influence is especially pronounced among individuals who are more susceptible to such effects, as shown by research indicating that people who report ghostly episodes tend to score higher on measures of boundary thinness, such as hypnosis-related attitudes and behaviors (e.g., Kumar & Pekala, 2001; Laythe et al., 2018, 2021).

But this art installation is not the only public instance of such overt priming. Bobby Mackey's Music World bar in Wilder, Kentucky, similarly warns patrons with a large placard that the establishment assumes no liability for any paranormal activity (Figure 2). Several other well-known paranormal tourism sites employ formal signage to warn visitors of potential ghostly encounters. At India's Bhangarh Fort, the Archaeological Survey of India apparently prohibits anyone from remaining after sunset due to local legends of curses and restless spirits (Pushkar, n.d.). In Kansas, the privately owned Stull Cemetery displays a prominent 'Keep out' sign that specifically cautions against

trespassing after dark to ward off its infamous gatekeeper ghost. New Jersey's Clinton Road 'ghost bridge' features an official county maintenance notice advising drivers to proceed with caution—an indirect warning of paranormal hazards. Romania's Hoia Baciu Forest is partially fenced and marked with 'No entry after dusk' signs, following reports of mysterious disappearances and unexplained phenomena (Malorie's Adventures, 2025). In Scotland, UK, the Black Mausoleum in Greyfriars Kirkyard is widely known for 'poltergeist attacks,' with warnings issued prior to tours and online about the potential for physical and mental distress (Ironside, 2018b). And in Philadelphia, Eastern State Penitentiary's annual 'Terror Behind the Walls' Halloween event has included clear disclaimers about 'supernatural experiences,' advising those with heart conditions or severe phobias to refrain from entering (cf. Houran et al., 2020, pp. 299–302).

As Figure 1 shows, the cemetery ghost brush plainly fuses a causal narrative ('ghosts can attach to people') with a visible ritual affordance ('the shoe brush') and a faux-authoritative tone ('City of Portland Bureau of Supernatural Containment'), together encapsulating the three input triggers inherent to the CRM framework. In doing so, it simultaneously (a) provides an explicit interpretive frame, (b) invites embodied enactment, and (c) conveys institutional credibility. The sign also possesses memetic simplicity, making it easy to photograph, caption, and share across social media (e.g., Berger & Milkman, 2012; Hill et al., 2018). Conceptually, these collocated features may serve as a minimal sufficient contextual variable to stimulate a cascading resonance, i.e., they prime priors, provide an enacted response option, and offer a credibility signal that enhances transmissibility, especially in individuals with thinner mental boundaries, or a perceptual-personality profile involving greater synthesis of imagery, ideation, and affect, often leading to heightened sensitivity, creativity, emotional openness, and anomalous experiences (Evans et al., 2019; Kumar & Pekala, 2001; Laythe et al., 2018; Roxburgh et al., 2024; Ventola et al., 2019).

The cemetery ghost brush in the CRM perspective

Table 1 summarizes the nine core mechanisms of PC as organized within the CRM framework (for a detailed presentation with supporting references, see Houran et al., 2025). These mechanisms are grouped into three layers: *input* (i.e., suggestibility, expectancy framing, and embodied simulation), *synchronization* (i.e., shared attention, interpersonal entrainment, and social appraisal), and *scaling* (i.e., prestige amplification, moralization/ affective intensity, and feedback loops/threshold dynamics). Each mechanism is defined in terms of its cognitive, affective, or social function, offering a clear operational scaffold for analyzing contagion dynamics in field settings. When activated in sequence, these mechanisms can transform ambiguous or overt stimuli into socially shared meaning and behavior. *The Ghost Brush*

TABLE 1.

Nine PC mechanisms in the three-layer CRM (Houran et al., 2025)

#	Contagion mechanism	Layer	Definition
1	Suggestibility and boundary thinness	Input	Dispositional and state permeability that fuels susceptibility to social cues
2	Expectancy and framing	Input	Verbal or contextual cues that bias priors and shape perception, affect, and action
3	Automatic mimicry and embodied simulation	Input	Rapid sensorimotor or affective mirroring that seeds alignment, amplified by cross-modal mapping in which cues in one sensory channel recruit somatic and affective responses in others
4	Attention synchronization and salience amplification	Synchronization	Shared focus (physical or algorithmic) that raises exposure and signal prominence
5	Interpersonal entrainment and neural synchrony	Synchronization	Temporal alignment of physiological or neural activity supporting coordination
6	Social appraisal and norm signaling	Synchronization	Interpretive/status cues that convert raw affect/perception into social meaning
7	Network and institutional amplifiers	Scaling	Algorithms, media, prestige, and scripts that stabilize and scale local synchrony
8	Moralization and affective intensity	Scaling	Ethical framing and high arousal that increase transmissibility and resistance
9	Feedback loops and threshold dynamics	Scaling	Iterative reinforcement and tippingpoint dynamics that produce nonlinear cascades

installation nicely illustrates how these mechanisms can be engaged to produce a full contagion cascade.

Figure 3 first shows the input layer, where psychological resonance begins with mechanism 1 (suggestibility and boundary thinness). Individuals high in cognitive permeability or transliminality are more likely to internalize ambiguous cues as meaningful (e.g., Thalbourne & Houran, 2000), especially when primed by context (e.g., Houran et al., 2002). For example, a person entering a dimly lit 'haunted' setting after hearing suggestive background stories may interpret a stray draft of air or a settling noise as a deliberate presence, reflecting how contextual cues can steer high-transliminal individuals

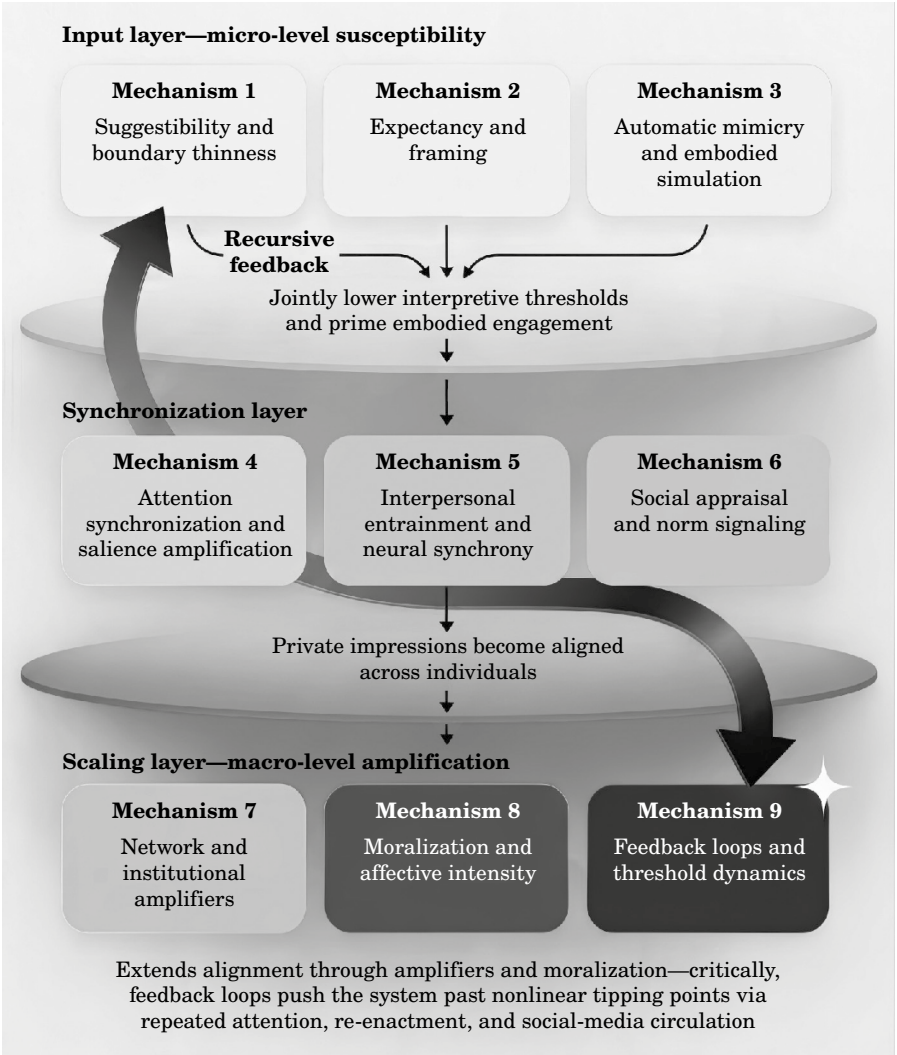

Figure 3. Micro-level susceptibility (input layer) is aligned across individuals (synchronization layer) and amplified through networks and moralization (scaling layer). Mechanism 9's feedback loops are the critical element: repeated attention, re-enactment, and circulation can push the system past nonlinear tipping points even under minimal stimulus conditions, as at The Ghost Brush *installation.*

toward meaningful interpretations of otherwise ambiguous sensations. This predisposition is amplified by mechanism 2 (expectancy and framing), in which verbal or contextual cues—such as the sign's ghost-themed caption—bias perceptual priors and lower thresholds for schema-congruent interpretations.

Mechanism 3 (automatic mimicry and embodied simulation) is then activated through ritual affordance. The presence of a simple motor action, such as brushing one's shoe, links cognitive framing to physical enactment, reinforcing belief and producing observable behavior that others can imitate.

This linkage can be further amplified by cross-modal mapping. The body does not process symbolic, visual, and proprioceptive information in isolated channels but integrates them syncretically, such that a visual cue (the sign) recruits tactile affordances (the brush) and affective-somatic responses (a felt sense of contamination or uncanny presence). This synesthetic blending—whereby meaning registered in one sensory channel activates resonant responses in others—means the ghost brush functions not merely as a semantic prompt but as a somatic one. Such cross-modal contagion is likely especially potent for boundary-thin individuals (Thalbourne et al., 2001), whose perceptual systems are already disposed toward synesthetic-like synthesis of imagery, affect, and bodily sensation (Simmonds-Moore et al., 2019), and aligns with broader accounts of embodied meaning-making in which the body is not a passive receiver of cues but an active integrator of cross-modal significance (Lakoff & Johnson, 1999; Merleau-Ponty, 1945/2010).

The synchronization layer builds on these primed responses by aligning attention, affect, and behavior across individuals. Mechanism 4 (attention synchronization and salience amplification) occurs when salient artifacts concentrate observers' focus on shared cues. The visual prominence of the brush and sign increases the likelihood that multiple individuals will attend to and interpret the same ambiguous event. Mechanism 5 (interpersonal entrainment and neural synchrony) describes automatic behavioral and physiological alignment among co-present individuals, fostering affective resonance and perceptual convergence; this process is further supported by empathic attunement and mirror-neuron responses that make others' reactions feel intuitively meaningful and contagious.

Critically, this entrainment is not confined to a single sensory modality: co-present individuals may synchronize not only in gaze direction and gesture but in respiratory rhythm, autonomic arousal, and postural adjustment simultaneously, producing a whole-body experience of 'being-in-sync' that carries visceral conviction beyond what any single-channel alignment could generate (Sheets-Johnstone, 2011). This multimodal bodily resonance provides a somatic substrate for the shared sense that 'something is happening here,' lending felt credibility to paranormal interpretations that purely cognitive accounts of entrainment tend to underestimate. Mechanism 6 (social appraisal and norm signaling) then transforms private ambiguity into socially endorsed meaning. Observing others brushing their shoes or commenting on the sign provides interpretive cues that validate and normalize the behavior.

At the scaling layer, mechanisms extend local alignment into broader social networks. Mechanism 7 (network and institutional amplifiers) is activated

through prestige and credibility cues. The sign's faux-official tone and formatting function as institutional signals, increasing perceived legitimacy and encouraging imitation and reposting. Mechanism 8 (moralization and affective intensity) enhances transmissibility and resistance to correction. If the sign evokes emotional arousal or moral framing—such as invoking respect for the dead or communal ritualism—this increases the likelihood of viral spread and interpretive entrenchment. Mechanism 9 (feedback loops and threshold dynamics) refers to iterative reinforcement via repeated attention, social endorsement, enacted rituals, or algorithmic boosting that produce nonlinear tipping and persistence. In the ghost brush example, repeated photos, comments, reenacted brushing, and social-media reposts can lock a local interpretive frame into a self-sustaining cascade that persists even after the artifact is removed.

A full contagion cascade, on the ground, typically unfolds as a recognizable experiential arc. Early in the sequence, individuals report subtle shifts in attention and bodily state—heightened vigilance, a sense of 'charged' atmosphere, or ambiguous sensations that feel personally meaningful. As synchronization takes hold, these private impressions become socially contagious: people cluster around the same cues, mirror one another's startled reactions, and begin to trade short, affect-laden interpretations ('Did you feel that?' or 'Something's off here'). Once scaling mechanisms activate, the atmosphere can shift rapidly. Groups may adopt shared rituals (e.g., everyone brushing their shoes 'just in case'), emotional tone intensifies, and ambiguous events are reinterpreted through a common narrative lens. Anxiety, excitement, or moral urgency can escalate, and the experience becomes self-reinforcing: each new reaction validates the last, producing a sense of collective momentum. In extreme cases, this can resemble the early stages of mass psychogenic episodes—heightened arousal, coordinated behavior, and a shared conviction that something significant is unfolding, even in the absence of external influences.

Together, these nine mechanisms form a coherent minimal pathway for contagion. That is, the cemetery ghost brush may shift observers' priors at the input layer, align their attention and behavior at the interpersonal layer, and then gain momentum through prestige cues, moral framing, and reinforcing feedback at the network layer. For individuals high in boundary-thinness—particularly those prone to psychological absorption or transliminality—the sign can therefore operate as a compact contagion engine, converting private ambiguity into patterned ritual and shared belief without invoking any transmissible supernatural agent. This demonstrates how even simple artifacts, when structured to engage CRM mechanisms, can propagate meaning and behavior across social space (Berger & Milkman, 2012; Vosoughi et al., 2018).

Understanding why some individuals are especially responsive to these cues requires examining the dispositional traits that heighten sensitivity to contextual prompts and suggestion. Psychological absorption, a disposition

toward deep imaginative involvement and immersive attention, heightens sensitivity to symbolic and contextual cues (Tellegen & Atkinson, 1974). Transliminality similarly reflects a heightened permeability to psychological material crossing thresholds of awareness and is associated with anomalous perception, magical ideation, and modestly increased susceptibility to suggestion (Irving et al., 2024).

Such tendencies are further amplified by suggestibility: thin-boundary individuals often show elevated imaginative or hypnotic responsiveness, making them more reactive to contextual prompts, implicit cues, and anomalous interpretations (e.g., Acunzo et al., 2020; Evans et al., 2019). Although research is mixed on whether transliminality and hypnotic responsiveness reflect a shared underlying factor or partially independent pathways (cf. Lynn et al., 2015), both reliably predict a greater propensity to internalize and elaborate suggested meanings. These overlapping sensitivities help to explain how a single, well-framed sign can catalyze coordinated belief and behavior among those most attuned to suggestion-driven interpretive shifts.

Managing contagion in field investigations

The preceding is instructive for spontaneous case researchers who routinely operate in environments primed for PC effects, wherein *a priori* belief, ambiguous stimuli, heightened expectancy, and group dynamics can rapidly escalate private impressions into shared beliefs and ritualized behaviors (e.g., Childs & Murray, 2010; Drinkwater et al., 2019; Eaton, 2019; Hill et al., 2018; Ironside & Wooffitt, 2021). The cemetery ghost brush demonstrates how environmental cues—when structured to engage one or more of the nine mechanisms of the CRM framework—can fuel full contagion cascades. To preserve interpretive integrity and minimize false positives, researchers must therefore actively monitor and mitigate these mechanisms across the model's three layers of input, synchronization, and scaling.

This need for careful mitigation is further underscored by findings in clinical parapsychology showing that different categories of anomalous experiences carry distinct anxiety profiles and that boundary-setting practices can play a protective role in shaping how such experiences unfold. Research consistently indicates that spontaneous, intrusive, or poorly integrated anomalous experiences are more strongly associated with anxiety and dysregulation, whereas structured, meaning-laden, or ritually contained experiences tend to correlate with better psychological adjustment (for a clinical discussion, see Houran et al., 2026b). This distinction highlights the importance of boundary maintenance as a psychological safeguard. Blackmore (1994), for example, observed that even simple rituals—such as explicitly 'closing' a Ouija session—can help participants to re-establish cognitive and emotional boundaries after liminal engagement. Similarly, Roxburgh and Roe (2011) found that mediums who employ clear interpersonal, temporal, and symbolic boundaries

report greater well-being and fewer anxiety-linked effects than those lacking an organizing framework. These findings complement evidence that certain practices, including Ouija board use, can be associated with elevated anxiety when undertaken without such structuring strategies (e.g., Escolà-Gascón et al., 2025). Together, this literature suggests that the presence or absence of boundary-maintaining frameworks is a key factor differentiating healthy from less healthy engagement with anomalous phenomena, reinforcing the need for investigators to attend to boundary conditions when assessing or managing contagion-prone environments.

At the input layer, these clinical distinctions underscore why mechanism 1 (suggestibility and boundary thinness) and mechanism 2 (expectancy and framing) require especially careful management in field settings, as both can heighten anxiety-linked interpretations and accelerate contagion dynamics. It should be noted that narratives influencing expectancy and framing may be present *in situ* (such as the ghost brush sign) or prior to investigations, through verbal or online discourse (Eaton, 2019; Ironside & Smith, 2024). Investigators should therefore avoid priming participants with leading narratives, sensational language, or paranormal labels before data collection. Instead, they should document baseline expectations, assess prior knowledge of a location, and screen for individual differences in transliminality or cognitive permeability that may bias perception. Mechanism 3 (automatic mimicry and embodied simulation) can be instigated by ritual affordances—such as inviting participants to touch objects, reenact events, or engage in symbolic gestures. These should be used cautiously and only after initial observations are complete, to avoid contaminating spontaneous responses.

In the synchronization layer, mechanism 4 (attention synchronization and salience amplification) and mechanism 5 (interpersonal entrainment and neural synchrony) can be inadvertently activated by shared focus on ambiguous cues—such as flickering lights, temperature shifts, or electronic voice phenomena playback. During investigations, interaction (talk, embodied action and expression) with research colleagues, study participants, shared objects, or the immediate environment shapes both interpretation and co-experience (Ironside, 2018a; Ironside & Wooffitt, 2021). Investigators should stagger exposure, isolate observers when feasible, film participants during fieldwork, and use blind protocols to reduce convergent attention. Mechanism 6 (social appraisal and norm signaling) is especially influential during post-event discussions where narrative editing (Eaton, 2019) and social alignment of reported paranormal activity may emerge (Childs & Murray, 2010)—for an in-depth discussion on related 'positive' gaslighting (or social pressure to endorse paranormal interpretations) and 'negative' gaslighting (or social pressure to resist paranormal interpretations) with individuals or groups, see Drinkwater et al. (2019). To prevent interpretive convergence, investigators should delay group debriefs, record individual impressions independently,

consider filming collective debriefs, and avoid affirming or dismissing others' experiences until all data are collected. Filming participants during fieldwork and debriefs enables investigators to identify moments of alignment, editing, and joint interpretation as they emerge in talk and bodily conduct, and to assess how these moments may evoke contagious effects.

At the scaling layer, mechanism 7 (network and institutional amplifiers), mechanism 8 (moralization and affective intensity), and mechanism 9 (feedback loops and threshold dynamics) pose risks when findings are shared publicly. This may be especially true for online dissemination. Digital content reinforces and co-creates the narrative and perception of haunted places which may, in turn, influence suggestibility, expectancy and framing (mechanisms 1 and 2) for future investigations (Ironside, 2023, 2024). The use of official-looking signage, branded equipment, or authoritative commentary can unintentionally amplify perceived legitimacy and increase viral spread. Furthermore, the use of various instrumentation, as reviewed by Houran and Lange (1998), should also be appropriately minimized to further lessen the ritual and perceived legitimacy effect. Investigators should contextualize findings with epistemic humility, clearly distinguish observation from interpretation, and avoid moral framing that could heighten arousal or resistance to correction. To blunt feedback loops and raise contagion thresholds (mechanism 9), investigators should delay or moderate public dissemination of preliminary observations, attach provisional and contextualized disclaimers to shared media, prefer controlled release (e.g., embargoes, moderated channels), introduce friction to sharing (e.g., delayed uploads, moderation), and monitor early network spread to insert corrective framing before amplification reaches critical mass.

Table 2 operationalizes this mapping into procedural safeguards, converting a conceptual model into a practical checklist. Each recommendation is aligned with a specific mechanism in the CRM framework, offering researchers a practical framework to minimize interpretive distortion and enhance methodological control. These strategies are particularly important in emotionally charged or symbolically loaded environments—such as culturally or sub-culturally defined 'hotspots'—where contagion cascades are most likely to occur. Understanding the local religious, spiritual, and cultural discourses is essential because these narratives shape investigators' and participants' expectations, interpretive frameworks, and susceptibility to suggestion. Culture influences not only how experiences are interpreted but also what counts as anomalous in the first place (e.g., Larøi et al., 2014). To be sure, PC is not merely a theoretical concern—it is a practical variable that can shape what is seen, felt, and believed during field investigations. By systematically mitigating the nine contagion mechanisms, investigators can reduce interpretive distortion, enhance empirical rigor, and foster more credible engagement with anomalous phenomena. Together, these strategies constitute a standardized control framework for anomalistic fieldwork, paralleling bias-reduction protocols in

TABLE 2.

Strategies to mitigate PC in field investigations (mapped to the nine CRM mechanisms)

#	Contagion mechanism	Field strategy
1	Suggestibility and boundary thinness	Assess investigators' transliminality levels to document baseline susceptibility prior to exposure, enabling careful interpretation of responses and tailoring of support. Screening should inform awareness and preparatory measures rather than serve as a criterion for exclusion, with particular attention to ethical considerations when individuals score at the extreme high end
2	Expectancy and framing	Assess prior knowledge of a location; avoid priming with paranormal labels or sensational language prior to data collection
3	Automatic mimicry and embodied simulation	Delay ritual enactments (touching, reenactment) until after initial observations
4	Attention synchronization and salience amplification	Stagger exposure; isolate observers when feasible to reduce convergent attention
5	Interpersonal entrainment and neural synchrony	Use blind protocols and minimize group observation of ambiguous cues; film investigators/ participants during fieldwork
6	Social appraisal and norm signaling	Record impressions independently; delay debriefs; record/film debriefs; avoid interpretive reinforcement
7	Network and institutional amplifiers	Avoid authoritative branding/signage; contextualize claims; limit prestige cues
8	Moralization and affective intensity	Refrain from moral/emotional framing; use provisional language and epistemic humility
9	Feedback loops and threshold dynamics	Delay or moderate public posting; attach contextual disclaimers; insert sharing friction; monitor early spread and intervene to raise thresholds

experimental science and marking a step toward cumulative methodology in parapsychology.

But might contagion effects also manifest in parapsychological ways? This intriguing question perhaps has no definitive answer at this time, though we can speculate. Cox (1961) discussed the notion of 'imitative fraud,' which describes trickery or the intentional manufacture of poltergeist-like events by individuals

out of an apparent need for attention or validation. This underscores that some paranormal reports are best understood as socially reinforced behaviors, whether fraudulently or sincerely experienced. Covert deception and other forms of ambiguous stimuli can also reinforce paranormal belief (Wiseman et al., 2003) or fuel a sense of enchantment (Lange & Houran, 2021) within and across individuals, which might be conducive for the production of legitimate parapsychological outcomes (for a discussion, see McClenon, 2024). This line of reasoning implies that socially mediated mechanisms—whether rooted in imitation, deception, or belief—may not only influence spontaneous anomalous experiences (Childs & Murray, 2010; Drinkwater et al., 2019; Eaton, 2019; Ironside & Wooffitt, 2021; Lange & Houran, 2001) but also serve as contagious catalysts for putative psi across certain networks.

Complementing these psychosocial perspectives, Batcheldor (1984) proposed that the removal of disbelief itself can sometimes facilitate unusual effects, suggesting that shifts in cognitive set or expectancy may not merely reflect underlying psychological states but can actively modulate the likelihood of anomalous phenomena being experienced and reported. In Batcheldor's view, when individuals suspend skepticism, adjust their thresholds for what counts as possible, and become more open to anomalous interpretation, the conditions are altered such that unusual events are more apt to occur or be perceived—either through psychological mechanisms, parapsychological processes, or an interaction of both. This balance between expectancy, cognitive openness, and experiential outcome provides a useful counterpoint to strictly social contagion accounts, enriching our appreciation of how belief systems and interpretive frameworks themselves contribute to the manifestation or spread of anomalous experiences.

Empirical work on collective anomalous phenomena suggests that psi-type effects are more likely to manifest during collective experiences involving synchronized emotions or intentions, such as religious rituals or cultural celebrations (e.g., Bancel, 2017; Nelson & Bancel, 2011; Nelson et al., 1996; Radin, 2023, 2025), and that cultural framing influences both what is reported and how it is construed by witnesses and investigators alike. Walter von Lucadou's model of pragmatic information (von Lucadou, 1995, 2015) likewise offers a provocative theoretical bridge between parapsychological phenomena and contagion dynamics. Rather than treating poltergeist episodes as externally imposed disturbances, von Lucadou reconceptualized them as emergent properties of complex social systems—specifically, as nonlocal correlations arising within psychosocially entangled networks of individuals under conditions of heightened stress, emotional arousal, and interpersonal tension. In this framework, the 'poltergeist' is less a discrete entity or force than a systemic expression of a destabilized social field, in which anomalous perceptions and experiences are co-produced by the relational dynamics among those present rather than generated by any single individual. This position is

elaborated theoretically through generalized quantum theory, which formalizes the conditions under which nonlocal, acausal correlations can emerge in psychological and biological systems beyond the domain of physics proper (von Lucadou et al., 2007; Walach et al., 2014).

This reconceptualization resonates intriguingly with contagion-based accounts of anomalous experience. If poltergeist phenomena emerge from the psychological and emotional entanglement of a social system, then the mechanisms driving their onset and escalation bear meaningful structural resemblance to those implicated in mass psychogenic illness and related PC effects—particularly suggestibility, interpersonal entrainment, expectancy-driven perception, and self-reinforcing feedback loops. The characteristic trajectory of poltergeist cases, typically involving an escalating cluster of reported anomalies that peaks before declining as social attention intensifies, mirrors the threshold and tipping-point dynamics described in cascade models of contagion (von Lucadou, 2001). von Lucadou's well-documented 'decline effect'—whereby anomalous correlations weaken systematically as external scrutiny increases—is consistent with the disruption of the closed social feedback loops that contagion frameworks identify as necessary conditions for cascade maintenance (von Lucadou et al., 2007; von Lucadou & Zahradnik, 2004).

Where the model of pragmatic information diverges most sharply from conventional contagion accounts, however, is in its insistence that the correlations underlying poltergeist phenomena are genuinely nonlocal—irreducible to purely psychological transmission between individuals—and that attempts to extract pragmatic information from the system will inevitably suppress the very effects under observation (von Lucadou, 1995; Walach et al., 2014). This positions von Lucadou's framework as neither straightforwardly parapsychological nor conventionally psychosocial, but as occupying a theoretically generative middle ground in which the boundaries between contagion, suggestion, and anomalous interaction remain productively unresolved.

But a neutral stance is warranted regarding the source of such putative effects. Although our discussion has emphasized living-agent psi in the context of paranormal contagion, this does not preclude discarnate-based interpretations. Rather, living-agent psi is highlighted because it aligns more directly with the psychological and social-cognitive mechanisms outlined in the CRM framework, and because it offers testable predictions about how stress, expectation, interpersonal dynamics, and boundary-thinness might generate or modulate anomalous events. At the same time, discarnate models remain part of the broader theoretical landscape, and scholars have long noted that ghostly episodes can be conceptualized through multiple lenses—including survival-based, environmental, cultural-symbolic, and psychodynamic perspectives (Houran & Lange, 2001). CRM does not adjudicate among these ontological positions; instead, it provides a mechanism-level account of how experiences become organized, amplified, and shared, regardless of their ultimate source.

These collective data points raise the possibility that various parapsychological findings (and thus potentially different forms of psi) may involve underlying PC cascades, though this connection remains entirely speculative. Nevertheless, interpreting clustered reports through mechanistic cues or explicit demand characteristics—such as *The Ghost Brush* installation—offers three key conceptual advantages for parapsychologists and field investigators. *First*, it shifts causal language from metaphor and mysticism to identifiable social-cognitive processes, aligning interpretation with cumulative scientific dialog on contagion and cascades (Christakis & Fowler, 2013; Hatfield et al., 1993; Houran & Lange, 1996). *Second*, it explains multimodal convergence—affect, perception, and behavior—as expected outcomes of the same resonance dynamics rather than as disparate phenomena requiring multiple unrelated explanations (Chartrand & Bargh, 1999; Friston, 2005). *Third*, it demonstrates that scaling phenomena do not necessitate mysterious transmission. Rather, well-understood network accelerants and threshold effects are arguably sufficient to account for rapid spread (Berger, 2011; Granovetter, 1978). This conceptual PC reframing encourages parapsychological reasoning that is both parsimonious and consistent with broader social and cognitive theory.

Given its integrative structure and direct applicability to spontaneous case research on ghostly episodes and kindred phenomena, we recommend that Houran et al.'s (2025) paper outlining the CRM framework be considered fundamental reading along with existing guidance on *ethical* (Baker & O'Keeffe, 2007), *procedural* (Parsons, 2018), and *educational* (Massullo et al., 2025) practices for aspiring field investigators. A key next step is to translate this framework into real-world settings where most paranormal investigators operate casually or without formal research training. One promising pathway is an intervention-based field study in which investigators receive a brief, structured educational module on contagion dynamics, anxiety-linked phenomenology, and basic documentation standards, followed by pre-/post-assessments of anxiety, expectancy, and interpretive discipline during actual investigations. Such work would test whether CRM-informed training measurably reduces contagion-driven distortion and increases interpretive clarity, while also generating a scalable model for community education that can be adopted by teams, workshops, and public-facing paranormal organizations. In this way, the CRM framework becomes not only a conceptual tool for scholars but a practical, evidence-based intervention for improving field practice among the groups most actively generating spontaneous case data.

Discussion

Our examination of *The Ghost Brush* art installation shows how a single, well-constructed environmental cue can activate the full spectrum of standard contagion mechanisms, offering a compact and realistic illustration of the CRM framework in action. Beyond its descriptive value, this case study invites broader

reflection on how parapsychologists conceptualize and investigate 'waves, clusters, or spikes' of anomalous events in spontaneous cases. Rather than defaulting to metaphysical explanations or invoking transmissible paranormal agents, CRM reframes contagion-type effects as emergent properties of social-cognitive dynamics—mechanisms that are identifiable, testable, and often observable in real-time (Houran et al., 2025).

Note that this paper only comprises a conceptual exercise rather than the report of a controlled empirical study. Our analysis simply operationalizes the CRM framework to explain how a demand characteristic or embedded cue can plausibly engage the nine contagion mechanisms in natural or structured settings, though it does not include systematic participant sampling, experimental manipulation, or blinded measurement required to establish causal efficacy. Moreover, it remains unknown whether the cemetery ghost brush itself has generated any clusters or flurries of spontaneous experiences among visitors, as to our knowledge there are currently no published academic studies or documented media reports addressing its perceptual or attitudinal impacts.

Still, this outside art installation, and related variants on its underlying demand characteristics documented elsewhere, constitutes an ecologically valid stimulus which is readily adaptable for rigorously designed field experiments and quasi-experimental protocols that build off prior efforts (e.g., Escolà-Gascón et al., 2025; French et al., 2009; Houran & Lange, 1996; Lange & Houran, 1997; Simmonds-Moore et al., 2017). These can include randomized exposure conditions, pre-post expectancy assessment, blinded observer arms, staggered group entry, and network tracing of reportage—each of which could empirically test CRM's proposed pathways and quantify contagion thresholds.

The CRM reframing nonetheless carries significant implications for both theory and field practice. Theoretically, CRM bridges parapsychology with mainstream cognitive science, affective neuroscience, and network theory, offering a unifying framework that accounts for multimodal convergence—where emotion, perception, and behavior synchronize across individuals and groups (Dumas et al., 2010; Hasson et al., 2012). It also provides a mechanism-rich alternative to vague constructs like 'energy' or 'presence,' grounding interpretation in falsifiable processes such as predictive coding, mimicry, and threshold dynamics (Friston, 2005; Granovetter, 1978). This shift from metaphor to mechanism strengthens parapsychology's epistemic posture and aligns it with cumulative scientific dialogue on contagion and cascades (Christakis & Fowler, 2013; Kramer et al., 2014).

A fuller account of these dynamics should also address how cross-modal mapping contributes to experiential intensity. Syncretic-type processes may constitute an underexplored substrate through which the CRM's mechanisms gain somatic traction. For boundary-thin or highly transliminal individuals in particular, the integration of visual, tactile, auditory, and affective signals into

a unified experiential gestalt can blur the distinction between what is being sensed and what is being imagined, accelerating the transition from private impression to shared interpretive frame. This embodied dimension of contagion aligns with phenomenological and enactive accounts of perception in which the body is the primary site of meaning-making rather than a downstream output of cognitive processing (Merleau-Ponty, 1945/2010; Noë, 2004), and with emerging research linking sensory processing sensitivity to anomalous experience and synaesthetic-like perceptual blending (Roxburgh et al., 2024; Simmonds-Moore et al., 2019). Future studies might usefully assess cross-modal sensory integration alongside existing measures of transliminality and boundary thinness to determine whether syncretic processing moderates both susceptibility to contagion and the multimodal richness of reported paranormal experiences.

Practically, CRM equips investigators with a diagnostic lens for fieldwork. It encourages pre-emptive design strategies to minimize interpretive distortion—such as blinding, staggered exposure, filming participants during fieldwork and post-investigation discussions, and independent reporting—and it highlights the importance of monitoring not just what participants perceive, but how those perceptions are shaped, produced, and shared (Childs & Murray, 2010; Drinkwater et al., 2019; Eaton, 2019; Ironside & Wooffitt, 2021; Lange & Houran, 2001). By turning the focus on themselves as a *group,* investigators can add the social environment as an analytical frame during fieldwork to identify and mitigate moments of potential contagion arising from co-presence and dynamical interaction. The model also cautions against inadvertently amplifying contagion through prestige cues, moral framing, or premature narrative closure (Brady et al., 2017; Henrich & Gil-White, 2001). In this sense, CRM functions as both a conceptual scaffold and a methodological safeguard.

A practical challenge, however, is that many participants in paranormal investigations—especially amateur or recreational groups—are drawn to these settings precisely because they enjoy the shared meaning-making, emotional arousal, and communal storytelling that synchronization and scaling mechanisms produce. Individuals who are already belief-prone or boundary-thin often self-select into such activities, increasing the likelihood of contagion dynamics from the outset. Bringing CRM-informed safeguards into these mainstream contexts therefore requires a balance between methodological rigor and the social value participants derive from the experience. One workable compromise is to preserve the group's meaning-making rituals but shift them after individual interviews and independent reporting. This sequencing allows participants to enjoy the communal interpretive process without contaminating primary data. Filming is especially valuable here (cf. Table 2): it provides an objective record of interactional dynamics, captures subtle moments of alignment or suggestion,

and allows investigators to reconstruct how interpretations emerged without relying solely on retrospective accounts.

When contagion reaches 'critical mass,' the experiential dynamics often shift from subtle alignment to rapid, self-reinforcing escalation. At this tipping point, the group's interpretive frame becomes dominant enough that ambiguous cues are no longer treated as ambiguous: ordinary sounds, bodily sensations, or environmental fluctuations are rapidly assimilated into a shared narrative, and dissenting interpretations lose traction. Affective intensity typically rises—attendees may report heightened vigilance, fear, excitement, or a sense of 'charged' atmosphere—and behavioral coordination becomes more pronounced, with individuals clustering around the same cues, mirroring one another's reactions, or engaging in improvised rituals that feel necessary or protective. Social media amplification can accelerate this process, transforming a local interpretive loop into a broader network cascade. In extreme cases, the pattern resembles early-stage mass psychogenic episodes, where emotional contagion, expectancy, and escalating arousal produce a temporary but compelling sense of collective significance. Understanding these dynamics underscores why CRM-informed safeguards—staggered exposure, independent reporting, delayed group discussion, and continuous filming—are essential for preventing interpretive runaway while still preserving opportunities for post-hoc communal meaning-making.

That said, CRM opens new avenues for experimental research. By isolating and manipulating specific mechanisms—such as expectancy framing, attention synchronization, or the pacing of micro-cues—researchers can test causal pathways and quantify contagion thresholds. Systematic testing becomes more powerful when the model is analytically decomposed into its constituent phases: (a) the introduction of cues, (b) the perceptual uptake of those cues, (c) the cognitive appraisal that follows, (d) the emotional resonance that emerges, and (e) the eventual behavioral propagation. Treating these phases as separable but interdependent allows researchers to perturb one stage at a time and observe where amplification accelerates, stalls, or reverses.

This kind of phase-based analysis supports a range of methodological strategies. Micro-experimental manipulations can vary the timing, intensity, or ambiguity of cues to reveal how expectancy and synchrony take shape. Sequential process-tracing methods—such as think-aloud protocols, reaction-time measures, or physiological monitoring—can capture how individuals move from one phase to the next. Network-level simulations can then stress test how small perturbations in early phases scale into collective outcomes, making it possible to estimate tipping points and saturation effects. Ethnographic or interaction-analytic observation adds a complementary layer by examining how people actually engage with a hot spot or installation, documenting how attention is recruited, how expectations are negotiated, and how resonance spreads through micro-interactions. Such close-up observation is especially

valuable for identifying tacit behaviors, improvisations, and contextual contingencies that controlled experiments may overlook.

Together, these approaches shift the field from post-hoc interpretation to proactive hypothesis-testing, advancing the study of contagion from descriptive casework to predictive modeling. They also underscore the need for interdisciplinary collaboration with social psychologists, cognitive neuroscientists, anthropologists, and complexity theorists who study similar multi-stage dynamics in other domains (e.g., Berger, 2011; Berger & Milkman, 2012; Vosoughi et al., 2018).

Finally, the example of the cemetery ghost brush underscores the importance of cultural and contextual sensitivity. What induces cascading resonance in one setting may be inert or ironic in another. Investigators must remain attuned to local norms, symbolic meanings, and network configurations that modulate contagion potential (Drinkwater et al., 2022; Lange & Houran, 2021). CRM does not claim universality; rather, it offers a flexible template for charting how specific cues interact with specific audiences under specific conditions to produce specific outcomes.

Viewed through this lens, CRM transforms contagion from a vague, folkloric-like placeholder into a structured, empirically tractable framework—one that parapsychologists cannot afford to ignore. It is important to understand that CRM is not a metaphor for groupthink, i.e., "a strong concurrence-seeking tendency that interferes with effective group decision making" (American Psychological Association, 2023). It is instead a mechanism map. Each layer—input, synchronization, and scaling—marks a distinct diagnostic zone that investigators can monitor in real-time rather than treating contagion effects as a mysterious residue of the supernatural. This shift is not merely semantic; it is epistemological. It demands that field investigators in particular move beyond anecdote and ambiance toward operationalization, measurement, and falsifiability.

The CRM framework and associated PC literature challenge researchers to abandon passive stances toward 'contagion' as a presumptively parapsychological or inexplicable effect and instead embrace it as a diagnostic lens, a methodological control, and a generative engine for new hypotheses (cf. Houran et al., 2025). Properly applied, the acknowledgement of standard psychological mechanisms does not necessarily diminish the mystery of ghostly episodes and other 'catchy' or memetic-like anomalous experiences—it sharpens it, stripping away the noise of social-cognitive resonance to reveal what, if anything, remains. In this way, PC becomes not a contaminant of inquiry, but a crucible for testing the resilience of certain parapsychological claims. If the field is to mature scientifically, it must confront the possibility that some, or many, of its most compelling ghostly episodes are not wholly evidence of the extraordinary, but manifestations of ordinary minds in extraordinary synchrony.

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ACKNOWLEDGMENTS

Thanks to Walter von Lucadou and two anonymous reviewers for their helpful comments on an earlier draft of this paper.

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