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Haunted people syndrome revisited: empirical parallels between subjective paranormal episodes and group-stalking accounts

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ABSTRACT

Research suggests a Haunted People Syndrome (HP-S) is defined by the recurrent perception of anomalous *subjective* and *objective* events. Occurrences are traditionally attributed to supernatural agencies, but we argue that such interpretations have morphed into themes of "surveillance and stalking" in group-stalking reports. We tested a series of related hypotheses by re-analyzing survey data from the 2015 Sheridan and James study to explore statistical patterns in "delusional" group-stalking accounts (N=128) versus"non-delusional" (control) accounts of lone-culprit stalking (N=128). As expected, we found that (i) account types had different Rasch hierachies, (ii) the Rasch hierarchy of group-stalking experiences showed a robust unidimensional model, and (iii) this group-stalking hierarchy correlated significantly with spontanous "ghost" experiences. However, we found no clear evidence for "event clustering" that might signify contagious processes in symptom perception. Findings support the viability of the HP-S construct and the idea that experiences of group-stalking and haunts share common sources.

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Delusions; encounter experiences; ghosts; group-stalking; Rasch scaling; syndrome

Introduction

Background

Reported interactions with folklore-type and "otherworldly" entities including angels, demons, gods, apparitions, extra-terrestrials, shamanic spirit guides, elves, fairies, poltergeists, and Men in Black (MIBs) have featured heavily in human culture throughout history. These "entity encounter experiences" (or simply "encounter experiences") can occur spontaneously (Evans, 1987; Suedfeld & Mocellin, 1987; Tyrrell, 1953/2010) or apparently on-demand via techniques like *mirror-gazing* (Caputo, 2010; Radin & Rebman, 1996), *sitter groups* or *séance-type sessions* (Laythe et al., 2017; Wilson et al., 2010), *transcerebral magnetic field stimulation* (Persinger et al., 2000; St-Pierre & Persinger, 2006), *meditative* or

trance states (Persinger, 1992; Tributsch, 2018), or the use of *psychedelics* (Winkelman, 2018).

Comparative literature (Evans, 1984, 1986, 1987, 2001; Hufford, 1982, 2001; Winkelman, 2018) and statistical studies (Houran, 2000; Houran & Lange, 2001; Pekala et al., 1995) indicate that outwardly disparate encounter experiences often share similar narrative themes and structures. There are also commonalities in the perceptual-personality profiles of the experients (e.g., Houran, Kumar et al., 2002; Kumar & Pekala, 2001; Laythe et al., 2018; Parra, 2018). These patterns arguably suggest a "family tree" of anomalies that is rooted in a core process and biological structure, but which can change its appearance in accordance with the sociocultural or situational context in which it manifests.

Group-stalking as encounter experiences

O'Keeffe et al. (2019; cf. Sheridan, 2019; Ventola et al., 2019, p. 164) speculated that contemporary accounts of putative "group-stalking" could be a new or novel embodiment of encounter experiences. "Group (or gang)-stalking" refers to victims who state that they are being mysteriously targeted by coordinated groups of people (Paullet et al., 2009). Interestingly, O'Keeffe et al. (2019) found that the phenomenology of an illustrative and popular case of group-stalking markedly paralleled the contents and defining patterns of ghostly episodes. These common features of ghost experiences and group stalking include the type, frequency, and progression of anomalous experiences, inherent themes of persecution, and occasional incidences of gaslighting of witnesses and so-called "street theater" (i.e., allegations of scripted events that aim to harass and stress targeted individuals). The religio-cultural themes of "spirits, spooks, and the supernatural" traditionally attributed to certain types of anomalous experiences might therefore be evolving in some select instances to "satellites, surveillance, and stalking" in the present techera. Our conjecture is consistent with the contextual mediation of contents observed for various encounter experiences (Captuo, 2014; Evans, 2001; Houran, 2000).

Seminal research by Sheridan and James (2015) suggests that the phenomenology of group-stalking differs from reported stalking cases involving lone-culprits and is arguably delusional in nature due to certain factors. First, the group-stalking percipients in their study exhibited depression and PTSD symptomology, as well as social and occupational difficulties. Both disorders are known for delusional or psychotic features if the disorders are sufficiently severe (*DSM-V*; American Psychiatric Association, 2013). More broadly, group-stalking is allegedly the work of a network acting in concert, but it is generally not possible for alleged victims to identify one lead person involved in carrying out the activities. Also, it is characteristic that victims are generally unable to provide any evidence as to who is behind the group-stalking, albeit they may attribute its origins to a specific source (e.g., an ex-partner or covert government agency). Conversely, in conventional stalking cases the offender is usually known to the victim. Illustratively, Spitzberg and Cupach's (2007) meta-analysis of 175 studies of stalking specifically found that 80% of victims knew the identify of their stalker.

O'Keeffe et al. (2019) proposed the moniker *Haunted People Syndrome* (HP-S) to describe encounter experiences that specifically manifest recurrently to the same percipients. The term *syndrome* denotes a set of signs and symptoms that occur together to characterise a particular abnormality or condition (British Medical Association, 2018),

and considerable evidence supports this depiction here. For example, Lange and Houran's (1998, 1999, 2001) structural equation model, with later nonlinear extensions (Lange & Houran, 2000), accounted for "ghostly episodes" in terms of the same, or similar, *attentional* or *perceptual* mechanisms (e.g., expectancy-suggestion effects and psychological contagion) likely operating in cases of mass hysteria or psychogenic illness (e.g., Boss, 1997; Chen et al., 2003; Colligan et al., 1982; Wessely, 1987, 2000).

Similarities in their respective phenomenologies are readily apparent, as both involve ambiguous stimulants that often trigger a sudden onset and cessation of dramatic signs or symptoms — psychological (or *subjective*, *S*) or physical (or *objective*, O) in nature —predominantly in young females, and during times of psychosocial stress or physiological arousal (cf. Boss, 1997; Lange & Houran, 2001). These "subjective" or private experiences include sensed presences, apparitions, contact or communication with unspecified supernatural agencies, possession by outside forces, and seeing elves and other types of "little people" (akin to Lilliputian hallucinations). "Objective" experiences refer to the perception of "tangible or externalized" anomalies, such as unexplained and localised sounds, electrical disturbances, apparent object movements, temperature changes, as well as vestibular alternations or other unusual affective or physiological complaints.

We should note here that percipients of ghostly episodes also tend to score higher on *transliminality* and similar measures of thin or permeable mental boundaries (e.g., Houran, Kumar et al., 2002; Jawer, 2006; Laythe et al., 2018; Parra, 2018). This latter finding implies a heightened susceptibility to high-arousal or "dis-ease" states (Evans et al., 2019; Ventola et al., 2019). It further seems that factors like transliminality can capitalise on humankind's potential biological basis or genetic predisposition for encounter experiences, and anomalous experiences in general (McClenon, 2004, 2012; Winkelman, 2004, 2018). Moreover, ghostly episodes (and related encounter experiences) and psychogenic illness both involve apparent psychological contagion, or the instigation of successive (episodic) perceptions or experiences due to priming effects or demand characteristics within individuals or groups (Houran & Lange, 1996; Laythe et al., 2017; O'Keeffe & Parsons, 2010).

Finally, Rasch (1960/1980) scaling analyses demonstrate that discrete *S/O* perceptions that define ghostly encounters and related encounter experiences can be modelled as a *probabilistic* and *unidimensional* hierarchy (cf. Table 1, left hand column) (Houran et al., 2019; Houran & Lange, 2001). This means that these anomalous experiences have a generally structured and predictable phenomenology, although specific aspects can shift depending on the attending circumstances. These include whether the experience is *spontaneous* (i.e., reportedly sincere and unprimed) versus based in *priming* (e.g., expecting to have an encounter); a consequence of *lifestyle* (e.g., active member of a paranormal association); a result of *fantasy* (e.g., engaged in an imaginative involvement exercise); or *illicit* (deliberately fabricated narrative) conditions (Houran et al., 2019). Table 1 illustrates that the themes and discrete experiences in group-stalking accounts can be interpreted as resembling a subset of those typically reported in ghostly episodes.

Taken together, the HP-S model sides with anomalistic psychology to posit that ghostly episodes and other encounter experiences fundamentally equate to delusion-like ideations, albeit not necessarily pathological. The affective or perceptual aspects of these ideations are facilitated by percipients' transliminality, which suggests that the contents derive, in part, from hypersensitivities to and amalgams of internal and external stimuli (Evans et al., 2019; Laythe et al., 2018). These contents are then compounded by the tendency

Table 1. Group-stalking experiences mapped to the corresponding themes from the "Haunted People" Rasch Hierarchy (Houran et al., 2019).

Spontaneous haunt experiences	Group-Stalking experiences
I had a sense of déjà vu, like something was vaguely familiar to me about my thoughts, feelings, or surroundings.	
I had the mysterious feeling of being watched, or in the presence of an invisible being or force.	• Secretly photographed, Followed, • Spied On
I heard mysterious "mechanical" or non-descript noises, such as tapping, knocking, rattling, banging, crashing, footsteps or the sound of opening/closing doors or drawers.	
I felt a mysterious area of cold.	
I felt a breeze or a rush of wind or air, like something invisible was moving near me.	
I saw with my naked eye a non-descript visual image, like fog, shadow or unusual light.	
I heard mysterious sounds that could be recognised or identified, such as ghostly voices or music (with or without singing).	• Lies spread about victim*
Electrical or mechanical appliances or equipment functioned improperly or not at all, including flickering lights, power surges or batteries "going dead" in electronic devices (e.g., camera, phone, etc.).	• Unsolicited telephone calls, • Unsolicited text messages, • Unsolicited emails
I had a negative feeling for no obvious reason, like anger, sadness, panic, or danger.	
I was mysteriously touched in a non-threatening manner, like a tap, touch or light pressure on my body.	
I saw with my naked eye an "obvious" ghost or apparition – a misty or translucent image with a human form.	
I saw with my naked eye an "un-obvious" ghost or apparition – a human form that looked like a living person.	• Secretly photographed*, • Followed*, • Spied On*
I felt odd sensations in my body, such as dizziness, tingling, electrical shock, or nausea (sick in my stomach).	
I experienced objects disappear or reappear around me.	• Left unwanted items, • Unsolicited letters
Pictures from my camera or mobile device captured unusual images, shapes, distortions or effects.	
I smelled a mysterious odour that was pleasant.	
I communicated with the dead or other outside force.	
I saw objects moving on their own across a surface or falling.	
I had a positive feeling for no obvious reason, like happiness, love, joy, or peace.	
I heard on an audio recorder mysterious "mechanical" or non-descript noises, such as tapping, knocking, rattling, banging, crashing, footsteps or the sound of opening/closing doors or drawers.	
I heard on an audio recorder mysterious sounds that could be recognised or identified, such as ghostly voices or music (with or without singing).	
I smelled a mysterious odour that was unpleasant.	
I was mysteriously touched in a threatening manner, such as a cut, bite, scratch, shove, burn or strong pressure on my body.	• Physically assaulted, • Victim's pet abused
I saw objects breaking (or discovered them broken), like shattered or cracked glass, mirrors or housewares.	• Home broken into, • Home vandalised, • Car vandalised
I saw objects flying or floating in midair.	
I felt a mysterious area of heat.	
I felt guided, controlled or possessed by an outside force.	

(*Continued*)

Table 1. Continued.

Spontaneous haunt experiences	Group-Stalking experiences
Plumbing equipment or systems (faucets, disposal, toilet) functioned improperly or not at all.	
I saw beings of divine or evil origin, such as angels or demons.	
I had a mysterious taste in my mouth.	
I saw folklore-type beings that were not human, such as elves, fairies, or other types of "little people."	
Fires have started mysteriously.	

*These group-stalking experiences might not *prima facie* appear similar to the referenced haunt experiences, but our review of many case descriptions does support such correspondences in some instances.

of some percipients to adopt explanations that are implausible, even esoteric or unorthodox, due to improper or biased consideration of evidence (see e.g., Garety & Freeman, 1999; Houran & Lange, 2004; Houran & Williams, 1998; Irwin, 2009; Irwin et al., 2012; Prike et al., 2018; Ross et al., 2017; van Elk, 2015).

The present study

This paper extends our foundational work on the hypothesised concept of HP-S (O'Keeffe et al., 2019) by re-examining Sheridan and James (2015) seminal survey data on "delusional" group-stalking accounts compared to "non-delusional" stalking reports involving lone-culprits. We will explore whether there are significant differences between the phenomenology of these two groups, as well as determine if patterns of the "delusional" group-stalking group conceptually replicate key findings from Rasch models of the "signs and symptoms" reported by witnesses in "ghostly episodes" (Houran et al., 2019). In this way, we aim to clarify whether group-stalking is an incarnation of the hypothesised broader construct of HP-S. Based on earlier research, (Houran et al., 2019; Houran & Lange, 2001; Houran, Wiseman et al., 2002) three main hypotheses were tested:

Hypothesis 1: Sheridan and James (2015) identified "delusional vs. non-delusional" respondents. We hypothesize that these two groups will show different hierarchies of signs and symptoms, and this will cause the two groups to have different Rasch hierarchies.

Hypothesis 1A. We regard group-stalking accounts as *direct* constructions and hence delusional respondents would seem to be actively initiating or controlling the narrative that their environments contain interconnected and coordinated sets of threats. Accordingly, delusional respondents make no substantive distinction between *subjective* and *objective* (*S/O*) events or symptoms. By contrast, non-delusional stalking accounts can be viewed as *indirect* constructions, since these respondents are not in control of circumstances but rather are reacting to the independent actions of actual culprits. Thus, the signs and symptoms of their group-stalking reports form an unstructured Rasch hierarchy in which *subjective* and *objective* events are inter-mixed in no particular fashion.

Hypothesis 1B: Not only does group membership (Delusional vs. Non-Delusional) likely introduce hierarchy shifts, but such shifts are expected to be sufficiently powerful and systematic for predict the respective group membership. As in earlier research (Houran et al., 2019; Lange et al., 2015) we will test this hypothesis by applying machine learning techniques to the Rasch residuals of the corresponding questionnaire items.

Hypothesis 2: For delusional respondents, the Rasch hierarchy of signs and symptoms will most closely align to the Rasch model of spontaneous "ghostly episodes" from Houran et al. (2019).

Hypothesis 3: The Rasch hierarchy of signs and symptoms for delusional respondents will show smaller variation across item locations than observed for non-delusional respondents, since "clustering" effects are consistent with the notion of "event flurries" that suggest possible perceptual biases or psychological contagion effects (Houran et al., 2019; Jones & Jones, 1994).

Method

Dataset

Data derive from the Sheridan and James (2015) previously published survey ($N = 256$) of two groups: "Delusional" respondents (i.e., self-reported group-stalking, $N = 128$, 75.8% female; $M_{age} = 45.6$ yrs, $SD = 12.5$) and a randomly-selected comparison sample of "Non-Delusional" respondents (i.e., self-reported lone-stalking, $N = 128$, 77.3% female; $M_{age} = 38.5$, $SD = 10.9$). We refer readers to Sheridan and James' original paper for full details on their samples and methods (pp. 4-7). Since their research design was a comparison of the characteristics of those reporting group-stalking with those reporting stalking by individuals, no matching of the samples on any parameters was undertaken, as this risked detracting from the identification of group characteristics.

Rasch scaling

A unidimensional Rasch scaling framework starts from the assumption that the "tendency to observe events that are construed as anomalous or unusual" is a "single latent trait." Respondents' answers are characterised probabilistically by two sets of parameters: D_i, the trait level implied by question *i*, also called the item "difficulty," i.e., the extent to which answering affirmatively requires a particular position along the latent Rasch dimension, and (2) T_j, the trait level of the person answering the questions. Together, these parameters define the following probabilistic response model (see, e.g., Andrich & Marais, 2019):

$$\log \frac{P_{ij}}{1 - P_{ij}} = T_j - D_i,$$

where P_{ij} represents the probability that respondent j reports observing event i. Note that *T* and *D*, are expressed in the same metric, i.e., the log-odds (or *logits*) as defined by the left side of Equation 1. Note that D increases with greater difficulty, e.g., for items *m* and *n* with $D_m < D_n$ experience *m* is reported more often than is experience *n regardless* of respondents' trait levels T. Therefore, *smaller* logit values indicate items that are more *frequently* or *easily* endorsed (i.e., "over-reported"), whereas *higher* logit values indicate items that are endorsed relatively *rarely* or with more *difficulty* ("under-reported").

The *D* and *T* parameters in Equation 1 were estimated using Linacre's (2018a, 2018b) *Winsteps* and *Facets* software, respectively. The latter allows other factors (e.g., sex) to be included in Equation 1 to assess their impact, either as main effects (men vs women), or as interaction effects. Interactions involving the D_j, are of particular interest as their existence indicates that items' difficulties vary across sub-groups, thus producing group-specific hierarchies. In the present research we wish to contrast the hierarchies for Delusional versus Non-Delusional respondents. The Rasch software also computes items'

fit to the Rasch model. It does via item Outfit values, whose theoretically optimal value is 1 — but fluctuations within the .7–1.4 range are generally deemed acceptable (Linacre, 2018a).

Results

Table 2 summarises the results of Rasch scaling all respondents simultaneously on the left (*"Combined Sample"*) and those separately for each group (*"Sub-Groups"*) on the right. We discuss the columns of this Table separately as they pertain to our hypotheses.

Hypothesis 1

This hypothesis that Delusional vs. Non-Delusional groups will show different hierarchies of signs and symptoms and consequently different Rasch hierarchies, received strong support. Figure 1 shows the relation between the item locations obtained in the Non-Delusional and Delusional groups plotted along the X and Y axis, respectively. In support of our prediction, the points do not fall along the line Y = X, as would occur if items' locations were similar for the two groups. Instead, we find an erratic pattern resulting in a relatively low ($r = .61$ correlation in contexts where correlations around .95 are common in the absence of systematic item shifts (see, e.g., Lange, 2017).

While the preceding implies that the two groups are fundamentally more dissimilar than similar, it is instructive to look at those items that deviate significantly from the line Y = X. In Table 2 the bold-face entries in the D_i columns for Non-Delusional and Delusional respondents indicate that items' locations in these two groups show statistically significant differences ($p < .01$). In particular, Items 2 ("being followed") and 3 ("spied on") are lower in the hierarchy of respondents deemed Delusional vs. Non-Delusional, i.e., these two events are *over-reported* by Delusional respondents, or, equivalently, they are

Table 2. Summary of Rasch analyses of survey data from Sheridan and James (2015).

		Delusional		Non-Delusional	
	Items	D_i[a]	*Outfit*[b]	D_i[a]	*Outfit*[b]
3	Spied on	**−2.06**	1.07	**−1.30**	.94
2	Followed	**−1.94**	.70	**−.39**	.90
4	Lies spread	−1.53	.90	−1.13	.79
7	Unsolicited calls	**−.67**	1.01	**−1.40**	1.00
1	Secretly photographed	−.28	1.18	.12	1.05
12	Home break-in	.07	.83	.68	.77
14	Car vandalism	.12	.82	.72	.92
9	Unsolicited items	**.26**	.85	**-.26**	.83
6	Unsolicited letters	**.45**	1.76	**-.59**	1.14
13	Home vandalism	.45	.70	.94	.61
15	Property vandalism	**.50**	.68	**.79**	.67
11	Pet abuse	.86	.96	.98	.96
5	Unsolicited emails	**.97**	**1.62**	**-.46**	**1.41**
8	Unsolicited texts	**1.21**	**1.64**	**-.31**	1.27
10	Physical assault	**1.62**	.87	**1.02**	.91
16	Other	**−.02**	**1.42**	**.60**	**1.64**

[a]*Delusional vs. Non-Delusional* groups have different item locations for bolded items ($p<.05$).
[b]*Outfit* statistic over 1.4 for bolded items.

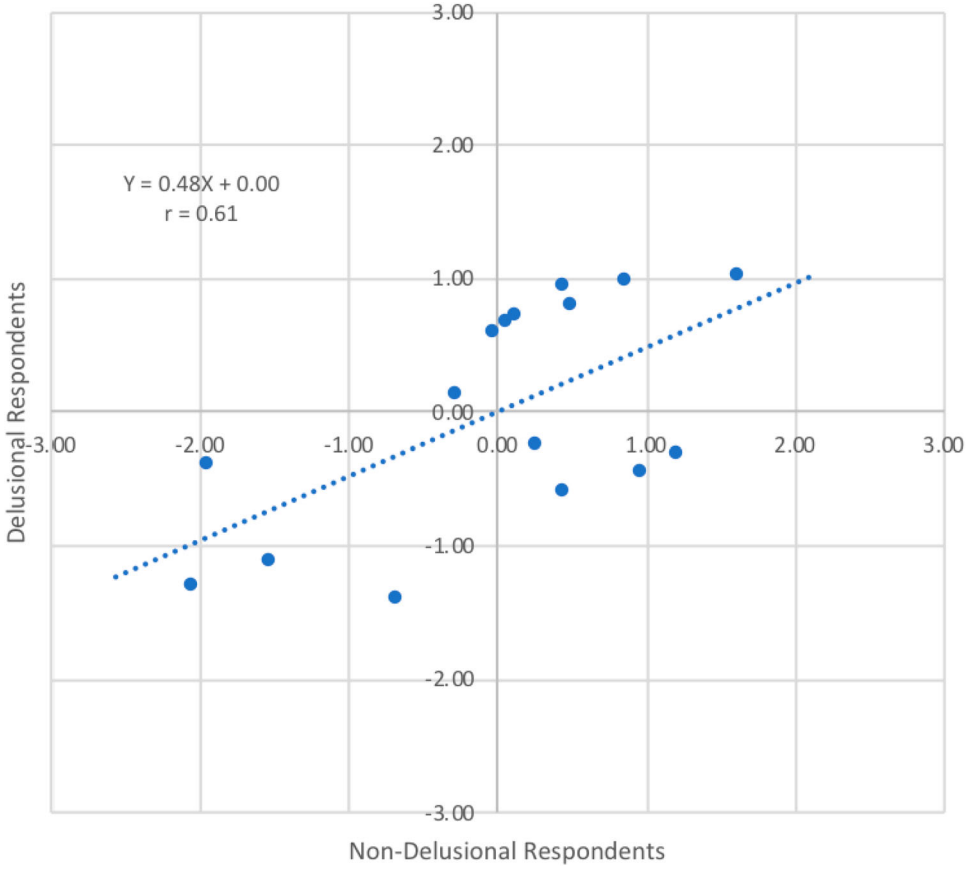

Figure 1. Item locations for Delusional vs. Non-Delusional groups.

under-reported by Non-Delusional respondents. By contrast, Items 5 ("unsolicited emails"), 6 ("unsolicited letters"), 8 ("unsolicited texts") and 10 ("physical attacks") have significantly lower logit values in the Non-Delusional group, i.e., legitimate stalking victims *over-report* these "physical" events, whereas Delusional respondents *under-report* them. Thus, Delusional respondents seemingly cast their narratives in more *subjective*, and arguably more difficult to verify, experiences. On the other hand, Non-Delusional respondents emphasise *objective* (or verifiable) experiences or features.

Hypothesis 1A

We created separate training and validation samples with 60% and 40% of the cases, respectively, and we used the Rasch residuals of respondents' observations as predictors of group membership (Delusional vs. Non-Delusional). Table 3 shows the results of four predictive approaches (Decision Trees, Linear Discriminant Analyses, Support Vector Machines, and Logistic Regression) to differentiate the two respondent types, and it can be seen that the overall percent correct across the four approaches is highly similar, ranging from 63.6% to 67.4% for Logistic Regression and Decision Trees, respectively. We thus conclude that Hypothesis 1A received strong support.

The Confusion Matrix in Table 4 shows the percentages of correct classifications in the Non-Delusional and Delusional samples, respectively, when a Decision Tree is used. Consistent with the high percentage of correct decisions a statistically significant association obtains ($\chi^2(1, N = 132) = 13.72, p < .001$).

Hypothesis 1B

Although the preceding showed that the Delusional and Non-Delusional item hierarchies differ greatly, they are stable within each of these groups and the two hierarchies are as predicted with respect to their *S/O* contents. Table 2 lists the items according to their locations in the Delusional group with the lowest D_i values first (i.e., the "easier to endorse" items). The hierarchy for the Delusional group seems bifurcated by logit values into *Subjective* experiences that define the earliest and most commonly types of reported anomalies, whereas *Objective* events come later and constitute comparatively rarer aspects of these accounts. By contrast, the non-delusional group shows an *S/O* mixture in the lower/beginning part of the Rasch hierarchy and later in the hierarchy encompasses a consistent array of (relatively rarer) *O* events.

Hypothesis 2

We predicted that the *S/O* phenomenology of the Delusional group would best match that of "spontaneous" (sincere and unprimed) haunt narratives in Houran et al. (2019), as opposed to control accounts from priming, lifestyle, fantasy, or illicit conditions. We made these comparisons by calculating Pearson product moment correlations between the logit values (i.e., item locations in the Rasch hierarchies) of *S/O* themes in accounts of group-stalking and those in ghostly episodes (cf. O'Keeffe et al., 2019). Accordingly, the higher and positive the correlation, the stronger the apparent alignment between the item locations (and hence hierarchical structure) of the anomalous experiences between the paired narratives.

Based on correspondences in themes made by O'Keeffe et al. (2019), Table 5 shows that the hierarchical structures of *S/O* themes in the control narratives had almost entirely near-

Table 3. Percentage of correct predictions.

Method	% Correct
Decision tree	67.4
Linear discriminant analysis	67.4
Support vector machine	66.7
Logistic regression	63.6

Table 4. Confusion matrix.

	Predicted	
Actual	Genuine	Delusional
Genuine	63	16
Delusional	25	28
% correct	71.6	63.6
% improvement over baseline	11.8	3.8

zero associations with the group-stalking phenomenology. Strikingly, there was a moderately-strong *inverse* correlation between the *S/O* phenomenology of group-stalking accounts and that of "illicit" (i.e., deliberately deceitful) haunt narratives. This suggests that Sheridan and James (2015) collection of group-stalking accounts was not deliberately falsified. It also fits with the known characteristics of group-stalking, including its negative impacts on those who report it (Sheridan & James, 2015). Indeed, some people who believed themselves to be group-stalked have retaliated against those they perceived to be targeting them and sometimes with fatal consequences (see Sarteschi, 2018).

Most importantly, Table 5 reveals a moderately-strong *positive* correlation (and thus putative alignment) between the Rasch hierarchies of *S/O* themes in group-stalking accounts and "spontaneous" ghostly episodes. This agrees with the idea that these two types of anomalous episodes reflect a common experience or phenomenology.

Hypothesis 3

Contrary to expectations, the variation in items' Rasch locations was smaller in the Non-Delusional group ($SD = .84$ Logits) than the Delusional group ($SD = 1.07$ Logits). However, this difference is not statistically significant (F (1,15) = 1.63, $p > .10$). Consequently, we have no clear evidence of "clustering" or contagion-type effects in the reported experiences for the Delusional vs Non-Delusional respondents. However, we note that the Delusional group showed some "item clusters" positioned somewhat lower in the Rasch hierarchy ("easier to endorse"), whereas most of the item-clusters in the Non-Delusional group were at the extreme high end of the Rasch hierarchy ("more difficult to endorse"). We offer no preferred explanation for this finding at this time, as additional research is needed to clarify its validity and relevance.

Discussion

Most of the empirical patterns found here between self-reported occurrences of "ghostly episodes" and "group-stalking" complement the conceptual parallels previously identified by O'Keeffe et al. (2019). We argue that this cumulative evidence provides a reasonable rationale for conceptualising some group-stalking accounts as ostensible incarnations of encounter experiences – with corresponding endemic characteristics that are consistent with the HP-S premise. Of course, Sheridan and James (2015) utilised close-ended questions about group-stalking victimisation, as opposed to free-response text. Future studies might therefore base comparisons between group-stalking accounts and ghostly episodes using free-response narratives or questions that allow more direct comparisons between themes. Nonetheless, our take on the present results offers important theoretical and clinical insights.

Table 5. Correlations between the set of logit values between corresponding items in accounts of group-stalking and ghostly episodes.

Group-stalking	Spontaneous haunts	Primed haunts	Lifestyle haunts	Fantasy haunts	Illicit haunts
r	.57	−.01	−.09	−.07	−.60

First, note that the most dominant classification system within the literature categorises genuine stalking cases into five sub-types, i.e., *rejected*, *intimacy-seeking*, *resentful*, *predatory*, and *incompetent* (Mullen et al., 2000). This triaxial system considers the context for the stalking, stalker motivations and psychiatric status, and the prior stalker-victim relationship. However, the group-stalking accounts from Sheridan and James (2015) neither appear to fit easily within any of these categories, nor seem to differ from one another in any meaningful ways pertinent to context, motivation, likely psychiatric state of the stalkers, or the nature of the stalker-victim prior relationship. However, our proposed syndrome model accounts for such remarkable similarity across the group-stalking accounts, as compared to the diverse narratives from "non-delusional" stalking victims. These trends further support the idea that group-stalking reflects a core phenomenon versus a range of different categories of stalking behaviour.

Second, we suspect that the range of "signs or symptoms" putative victims experience or report with group-stalking has been understudied and perhaps too restrictive. Sheridan and James (2015) identified several major *S/O* events associated with group-stalking, but we anticipate that self-reported victims will also endorse other, if not many, of the 32 discrete *S/O* anomalies in Table 1 that characterise accounts of ghosts, poltergeists, and haunted houses (cf. Houran et al., 2019). For example, Rasch scaling analyses (Houran & Lange, 2001; Houran et al., 2019) indicate that ghostly episodes are partly defined by a wide variety of *S/O* events. We likewise predict similar arrays of anomalous experiences for putative victims of group-stalking.

Third, we hypothesise that group-stalking experients will exhibit perceptual or reasoning biases associated with magical thinking and delusion-like ideations (e.g., Houran & Lange, 2004; Garety & Freeman, 1999; Irwin et al., 2012; Prike et al., 2018; Ross et al., 2017; van Elk, 2015). For instance, Ross et al. (2017) explored the role of reasoning biases in the formation of paranormal explanations of anomalous experiences. That study built on research highlighting cognitive deficits associated with paranormal beliefs (for a review, see Irwin, 2009), i.e., the adoption of implausible explanations for anomalous experiences due to improper or biased consideration of evidence.

Ross et al. (2017) specifically argued that this result has implications for cognitive theories of delusions. For instance, Lange and Houran's (1998, 1999, 2000) model of subjective paranormal belief and experience draws on attribution theory in the clinical literature (e.g., Jaspers, 1923/1963; Maher, 1988, 1992; Kihlstrom & Hoyt, 1988), which explains delusions as a byproduct of an individual's failure to find a standard explanation for anomalous experiences or ambiguous events. Other research challenges the adequacy of a "one-factor" model of delusions and recommends a "two-factor" model (Coltheart et al., 2011; Davies et al., 2001).

Two-factor proponents contend that the one-factor model is underspecified and that a second factor —an impairment of the belief evaluation system —is required to explain the process by which unusual (ambiguous or anomalous) experiences lead to delusional ideations. These advocates propose that the "abducted inferences" generated in Maher's model only become delusional when the normal processes of belief evaluation are impaired. Consistent with this two-factor model, Ross et al. (2017) found that individuals low in "analytic cognitive style" (i.e., the willingness or disposition to critically evaluate outputs from intuitive processing and engage in effortful analytic processing) were more likely to invoke paranormal or esoteric labels for anomalous experiences.

Nevertheless, we would be remiss not to contrast group-stalking findings in the current and previous work from some research examining haunt-type experiences alone. Contrary to broader examinations of paranormal belief (e.g., Irwin, 2009), studies that specifically examined ghostly episodes showed that participants, unlike the group-stalking data used here, did not significantly differ in areas of cognitive impairment to those who reported no haunt experiences (Laythe & Owen, 2012; Laythe et al., 2018). As such, one primary difference from this sample compared to group-stalking samples is an apparent lack of indicators for mental illness or pathological deficiencies in cognitive processing. That said, self-reported haunt-experiences are linked to higher levels of transliminality (e.g., Laythe et al., 2018; Ventola et al., 2019), which itself is a risk factor for various cognitive and affective ailments (Evans et al., 2019).

Accordingly, exploring potential perceptual or reasoning biases and transliminality levels in self-reported group-stalking victims, as well as other ostensible HP-S cases, is an area ripe for future research. Other biological factors might also come into play in these apparent delusional-type ideations. For instance, some evidence suggests that asymmetric dopaminergic signalling (R > L), and not elevated dopaminergic signalling, underlies psychosis neurochemistry in schizophrenia (see e.g., Bracha, 1989). Moreover, future research efforts should also investigate the interpersonal or social psychological variables likely involved in the genesis, interpretation, or maintenance of phenomena within our HP-S rubric (Drinkwater et al., 2019; Hill et al., 2018, 2019). Here we acknowledge that many delusional ideations or anomalous experiences are inherently private or solitary experiences. Still, encounter experiences, epidemic hysteria, and group-stalking all seem to possess an inherent quality that can be described as *shareability* (Annett et al., 2016) or *scalability* (Hill et al., 2018, 2019).

Simply put, this entails a process of shared meaning-making or the social construction of narratives. There have been extensive discussions on this general topic (e.g., Boothby et al., 2014; Cooney et al., 2014; Rimé et al., 1991), but it appears to be understudied and poorly understood in the context of delusion-like beliefs or anomalous ideations. However, we assert that dedicated research in this area will inform a better understanding of psychological "contagion" mechanisms that induce people to act as deliberate or unwitting participants in anomalous or delusion-like episodes (see e.g., Bartholomew & Wessely, 2002; Boss, 1997; Cole et al., 1990; Derr & Persinger, 1989; Kerckhoff, 1982; Kerckhoff & Back, 1965; Sirois, 1974; Wessely, 1987).

As such, we advocate continued studies of both ghostly episodes and group-stalking to gain unique and ecologically valid insights about salient attentional, perceptual, and interpretive processes operating here. For example, "cognitive attraction" and "social function" help to facilitate the transmission of frequent collective rituals (Kaše et al., 2018). Likewise, such variables perhaps also mediate expectancy effects, demand characteristics, or "meme" behaviour in situations whereby *in-group* and *out-group* social dynamics can contribute to esoteric beliefs and anomalous cognitions (see e.g., O'Mahony, 1978; Orne, 1962; Slosson, 1899; Smith, 1992-1993; Wiseman et al., 2003).

Our premise that spontaneous "ghostly episodes" and "group-stalking" accounts share a core experience is not above criticism: To be sure, despite several empirical similarities demonstrated in this study, there remain some real or apparent differences or discrepancies between these two anomalous experiences that should be explored and rectified. Alternative to our HP-S framework, one possible explanation for the differences

between group-stalking and ghost-encounters might be found in the two-factor model of delusions previously discussed but without making links between both experiences. Assuming different types of delusions, it could be that there is a failure to find a standard explanation for group-stalking experiences, and an impairment of the belief evaluation system for "spontaneous" ghost encounters. Moreover, as both anomalous experiences seemingly present a "schizotypal" way of decoding reality, ghost encounters might relate more to *positive* schizotypy and group-stalking experiences more to *negative* schizotypy (with its psychosocial morbidity). Many other ideas or alternative explanations certainly could be proffered.

Consequently, this paper is not the final word on the concept of HP-S or the potential linkage between some subjective paranormal experiences and group-stalking accounts. Arguably no single study or clinical model to date explains all the available data. However, we hope our work motivates more sophisticated research designs that tackle the similarities and differences presented here and explore new ideas that corroborate or refute the HP-S concept. The potentially extreme dangers accompanying ideations of group-stalking make it vitally important to understand the antecedents and correlates of this phenomenon—whatever its ultimate etiology. Those dealing with group-stalking claims in a professional capacity unfortunately have few resources to leverage at present. However, our hypothesis that these reports are manifestations of the HP-S concept recommends that clinical practitioners should take guidance initially from academic sources that explain how to contextualise and address "unexpected or troubling" anomalous experiences using clinical, phenomenological, or transpersonal frameworks (see e.g., Drinkwater et al., 2013; Garety & Freeman, 1999; Hastings, 1983; Murray, 2012; Rabeyron & Loose, 2015).

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