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Awakening the sense of the possible: the Symptoms Clinic as liminal affective technology

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ABSTRACT

Persistent ('medically unexplained') physical symptoms (PPS) that are disproportionate to detectable disease are common in all clinical settings, with significant impacts in terms of quality of life and cost to health services and society. In the absence of an orthodox biomedical explanation, PPS are often attributed to psychological causes and associated with significant stigma. Emerging neuroscientific approaches to symptom explanation imply causal complexity – involving factors across biological, psychological, and social systems – which exceeds what a conventional diagnostic consultation is designed to address. A successful clinical model needs to be able to open, but also contain, a discursive space for the type of complexity that is relevant to PPS. In this paper we present the Symptoms Clinic Intervention (SCI) as a new model of consultation for patients with PPS. While the SCI was developed in the context of a system broadly organised by the norms of biomedicine we argue that, in its operation, it deviates from such norms in significant and instructive ways. Drawing on causal dispositionalism and on liminality theory, we offer an account of the efficacy of the SCI focused on its ability to shift problematic dispositions. We propose that a carefully crafted experience of liminality can catalyse change by shifting hardened dispositions even in the context of a relatively brief and time-limited intervention such as the SCI. Importantly, this shift refers not only to dispositions in and of the patient, but also to the dispositions of the medical system and of the clinician as its operator and representative.

1. Introduction

Persistent physical symptoms (PPS), which are often disproportionate to detectable physical disease, are common in all clinical settings (Löwe et al., 2024). In the UK they account for approximately one third of referrals from general practitioners to specialists (Nimnuan et al., 2001). Approximately 2 % of adults experience multiple physical symptoms at a level which impacts significantly on their quality of life (Verhaak et al., 2006), accounting for substantial costs to health services and to society (Bermingham et al., 2010). PPS are often attributed to psychological causes and associated with significant stigma (Jutel, 2010).

PPS are empirically ubiquitous, yet epistemically marginal. The nomenclature and classification for these conditions have been an object of debate for decades. Recent terminological developments reflect the view that symptom disorders should be identified based on positive criteria (persistence or characteristics of symptoms) rather than negative ones (absence of disease) (Löwe et al., 2024). Despite this, in much of the research literature these conditions are still addressed as 'medically unexplained symptoms' (or 'MUS'), which implies the absence of disease-as-explanation as the main defining criterion.

While there are valid grounds to reject 'MUS' as scientifically inaccurate and clinically unhelpful (Creed et al., 2010), the expression is sociologically interesting in that it points to an enduring difficulty in acknowledging symptoms as a medically relevant reality in their own right. This difficulty stems from the epistemic structure of modern biomedicine (Fabrega, 1990; Deary, 2005), also referred to as the 'disease model' (e.g. Van den Bergh et al., 2017). In the biomedical or disease model, the (subjective, unobservable) experience of symptoms is considered secondary or epiphenomenal with respect to the (objective, observable) reality of underlying pathology, such that the reality of illnesses that are not supported by evidence of disease cannot be veri-fied,

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or 'made true'. By epistemic default, such illnesses therefore appear 'imaginary' (or 'in the mind'). Despite multiple proposals and developments – from the 'biopsychosocial model' to patient-centred medicine – that have sought to address the limitations of biomedicine, these ontological assumptions continue to underpin mainstream (Western) medical practice at a fundamental level. The consequences of this epistemic structure have been intensified by the emergence of evidence-based medicine, and the formalisation of hierarchies of evidence informing the development of clinical guidelines (Dumes, 2020).

In clinical practice, the epistemic structure of biomedicine can produce 'epistemological incongruence' in the doctor-patient relationship due to conflicting assumptions and vocabularies they respectively bring to the encounter, generating frustration on both parts (Johansen and Risør, 2017). Clinicians often dismiss PPS as insignificant, and people who experience them need to work hard to become a 'credible patient' (Werner and Malterud, 2003). As part of this effort patients may adopt a 'symptomatic idiom of explanation' – a way of talking about their illness that focuses on the search for physical causes and a cure – despite evidence that in non-clinical settings they move freely between *symptomatic*, *personal*, *social*, and *moral* idioms (Risør, 2009). A symptomatic idiom of explanation 'parallels the paradigmatic idiom found in biomedicine' and is the only idiom that is conceptually shared by PPS patients and their GPs (ibid.: 511, 517). This is consistent with studies of GP consultations in the UK which found that doctors typically encourage patients to focus somatically, by ignoring psychosocial cues when patients provide them (e.g. Ring et al., 2005).

While a focus on physical causes and cures is thus encouraged by the norms of biomedicine, persisting in a symptomatic idiom when clinical findings do not provide proportionate evidence of disease can produce paradoxical and iatrogenic effects. Instead of their experience being validated and becoming 'credible', patients can become conspicuous for failing to be reassured, prompting negative feelings in clinicians (Wileman et al., 2002) and a 'more robust presentation of … symptoms' (Dowrick et al., 2004: 167) in renewed efforts to be believed. This dynamic has important clinical significance because '[i]f you have to prove you are ill, you can't get well' (Hadler, 1996). People with PPS have been described as 'victims of the biomedical model' (Rocca and Anjum, 2020: 79).

1.1. *The Symptoms Clinic Intervention–a second-order analysis*

This paper offers a theoretical analysis reflecting on the process and results of a UK-based, large multicentre randomised controlled trial of a clinical intervention for patients with PPS, called the Symptoms Clinic Intervention (SCI). All five authors were members of the original research team for the trial, in different capacities (specified below). Here we propose a second-order interpretation of the efficacy of the intervention, using a novel theoretical framework.

1.1.1. *The Symptoms Clinic Intervention and Multiple Symptoms Study 3*

The SCI draws on recent developments in the science of interoception (Chen et al., 2021), symptom perception (Henningsen et al., 2018), and biopsychosocial integration (Löwe et al., 2022), to propose that symptoms can be increasingly understood as entities in their own right (Burton et al., 2020) and usefully explained (Burton et al., 2015). The intervention was developed with the aims of recognising and validating the patient's experience; co-producing individually relevant explanations; agreeing actions, based on the explanation, to manage symptoms or limit their impact; and offer opportunities for reflection and learning to both patient and clinician. In practice, the SCI consisted of 4 extended consultations with especially trained general practitioners (GPs) working in an extended role outside of their usual clinics. The first consultation was designed to last around 50 min, followed by up to three further consultations of between 15 and 20 min each. The consultation process as a whole was broadly structured, across the several sessions, by four steering principles – *Recognition, Explanation, Action, Learning* – whose initials together form the acronym 'REAL'.

Multiple Symptoms Study 3 was a large multicentre randomised controlled trial of the Symptoms Clinic Intervention conducted in the UK between December 2018 and June 2023. The trial was registered (ISRCTN57050216), had UK NHS research ethics approval (reference 18/NW/0422) and the protocol was published (Mooney et al., 2022). The trial found a statistically significant improvement in the primary outcome (the PHQ-15 symptoms measure at 12 months after enrolment) (Burton et al., 2024). MSS3 included an embedded qualitative element with two distinct aims: 1) to evaluate the trial processes, including the fidelity of delivery of the intervention; and 2) to explore and generate hypotheses regarding processes of change at play in the Symptoms Clinic. The team involved in qualitative analysis comprised two sociologist co-investigators (MG and TS), a social scientist research associate (KF), and the lead investigator (CB). This group met regularly throughout the study to review and analyse qualitative data which included transcribed recordings of consultations and interviews with trial participants and clinicians (further described below). Throughout the process the investigators took a pragmatic and pluralist approach to methodology, emphasising reflexivity within the research team. Two first-order analyses of the qualitative data have been published regarding intervention delivery (Fryer et al., 2023) and mechanisms of change (Sanders et al., 2024). This paper presents a further second-order analysis placing the intervention in a wider context of onto-epistemological debates.

The Symptoms Clinic Intervention in MSS3 was delivered by 5 specially trained GPs, selected by competitive interview and working in specific Symptoms Clinics. All consultations were recorded, and 25 % of these recordings (144 of 586) were transcribed, mostly in the first year of the study, as part of the monitoring of intervention delivery. For the process evaluation and subsequent analysis we compiled a qualitative dataset sourced from transcribed consultation recordings, interviews with patients from the SCI arm of the trial, and interviews with GPs who delivered the SCI during and after training for the study. From these sources we selected a purposive sample of transcripts, based on participant characteristics of main symptoms and allocated GP. This data comprised 49 consultations (from 15 patients), interviews with 19 patients (different from those whose consultations were analysed) and 10 interviews with 5 GPs.

1.1.2. *Theorising efficacy as the shifting of dispositions–our approach in this study*

In this paper we present a novel theoretical framework that addresses the problem of causality in PPS in a non-reductive way. This approach to causality helps to make sense of how and why the Symptoms Clinic may be efficacious (on the premise that its efficacy has already been empirically demonstrated by the trial results – see Burton et al., 2024). We developed this framework by conjugating causal dispositionalism (Mumford and Anjum, 2011) with liminality theory (Stenner, 2017; Turner, 1982) in iterative dialogue with observations drawn from empirical data, using an abductive approach to theory generation and data analysis (Tavory and Timmermans, 2014). In addition to the consultation and interview transcripts used for the process evaluation element of MSS3, this study draws on observations of the training of GPs, GP training materials, and the intervention manual (see Table 1).

Our analysis yields an account of the efficacy of the SCI focused on its ability to shift dispositions. We propose that a carefully crafted experience of liminality can catalyse change by shifting long-standing dispositions even in the context of a relatively brief and time-limited intervention such as the SCI. We describe this contribution as a 'second-order' analysis because its aim is not only to provide an account of how the SCI works, but also to make explicit the broader epistemic significance of the intervention in the context of a wider set of debates about causality and the nature of PPS.

Our approach affords a serious consideration of the iatrogenic dimension of current biomedical management of PPS. We propose that

Table 1
MSS3 data sources.

Source	Description	Data contributing to analysis	Notes
Study materials	Trial protocol, intervention handbook, training sessions	Documents, observation of study meetings by MG	MG as co-investigator, embedded in the trial team.
Extended role GPS	GPs recruited and trained to deliver intervention	Observation of training (MG), transcripts of interviews (conducted by KF) during and after training.	10 interviews from 5 GPs
Patient Participants	Adults with multiple persistent physical symptoms (X received at least one symptoms clinic consultation)	Interviews (KF) with 19 participants receiving at least one SC appointment, purposively selected for spread of symptoms and allocated GP	Interviews spread in time, some after first consultation, some at end of treatment.
Symptoms Clinic Consultations	Sets of initial + follow up consultations (approx. 2hrs per patient in total) recorded and transcribed	Transcripts of consultation sets, (initial coding by KF), regular analysis meetings (MG, KF, TS, CB)	35 transcripts selected for spread of main symptoms and allocated GP. Exclude those from patients who were interviewed

the SCI becomes efficacious by doing more than meeting the overt aims (stated in the trial protocol) of providing ‘recognition’ and ‘explanation’ to facilitate ‘action’ and ‘learning’. The process through which these aims are achieved, we argue, implicitly relies on *undoing* some of the dispositions implicit in mainstream biomedical practice – such as the inclination to test and verify in order to diagnose, or the disposition to treat explanations as stable representations of objective reality.

This *undoing* invites us to consider the SCI as an epistemic event of potentially broader significance. We use ‘epistemic’ to point to what Foucault described as *epistemes* or *discursive formations* (Foucault, 2001, 2002). The expression refers not only to forms of knowledge but also to material practices, social norms and, crucially, to *forms of perception* that are held together by a common set of (historically and culturally specific) assumptions about the nature of ‘reality’ in general – and of medical realities in particular. An *epistemic event*, as we use the term here, is an event that exemplifies a significant break or departure from a previous set of assumptions. The SCI, we propose, can be said to enact a model of causality that differs in significant ways from that of biomedicine, with potentially important consequences for the embodied and co-enacted reality of symptoms. The theoretical framework we develop in this paper provides the conceptual resources for understanding the SCI as such an epistemic event.

2. PPS as epistemic anomaly

Orthodox biomedical practice acknowledges the reality of many symptom-based conditions whose aetiology is ‘not fully understood’ – migraine being a classic example of this – but the operative assumption, typically implicit, is that lack of generalisable causal knowledge is provisional rather than stemming from the intrinsic nature of the phenomenon (or from its ontology). In many cases, aetiological questions are trumped by the availability of effective pharmacological treatments. These can then function retroactively to support causal inferences about aetiology, and to confirm the privilege ascribed by default to biological, materialist explanations. This type of inference is particularly evident in psychiatric research (e.g. Pereira and Hiroaki-Sato, 2018), as well as efforts to promote public understandings of psychiatric disorders (e.g. Wrobel, 2007). The phenomenon of PPS does not lend itself to this type of solution, and thus begs the question of causal explanation.

The problematic of PPS has exemplary value as an indicator of two closely related limitations of modern biomedicine: one cognitive, the other practical and therapeutic. The cognitive limitation stems from biomedicine’s way of seeing and knowing. If approached through the lens of biomedical epistemology, PPS are not merely *unexplained*: they are rather rendered *unintelligible* by the very modes of intelligibility otherwise employed to establish the presence of medical conditions. This unintelligibility, moreover, is not medically neutral. It translates into forms of discourse and practice that can be powerfully noxious for the individuals concerned – recall Hadler’s ‘[i]f you have to prove you are ill, you can’t get well’ – hence the second, therapeutic limitation. The pragmatic paradox in which so many patients become trapped demonstrates how the norms of biomedicine, and the expectations associated with them, feed into pathogenesis and can become part of the medical problem (Niesten et al., 2020). PPS constitute an exemplary case of the ‘conversion of cultural meaning’ into embodied experience, illustrating how ‘shared [biomedically-informed] representations and beliefs about illness [which also inform practice] shape the manifestation of symptoms and the meaning of sensations’ (Canna and Seligman, 2020; specifications added).

2.1. PPS and the problem of causality

Explaining PPS and the iatrogenic effects of biomedical culture rests on adopting assumptions about the nature of causality that differ from those implicit in biomedical standards of evidence. This point has been clearly argued in a volume addressed to the problem of *Rethinking Causality, Complexity, and Evidence for the Unique Patient*, led by a multidisciplinary team comprising expertise in pharmacy, molecular medicine, and philosophy (Anjum et al., 2020). The authors propose an approach they name ‘causal dispositionalism’ as an alternative to the statistically-based approach to causality that provides the gold standard for research and causal inferences in biomedicine. Modern empiricist methods are based on the Humean notion that the only realities to be taken into account in scientific inquiry are those that can be established through observation and measurement. In this (still dominant) version of empiricism it is assumed that cause-effect relations express a form of reasoning: as such they can never be directly observed, but only inferred from the observation of regularities that become apparent across a large number of cases (Hume, 1985 [1939], Book 1, Part III). The biomedical approach to causality and explanation is similarly premised on the possibility of generalising: the only causes that can be scientifically inferred are those shown to be statistically significant.

While all health conditions involve a degree of complexity and uniqueness, for most of them it is possible to establish statistical evidence of a ‘single or few physical, or biomedical … causes’ (Anjum and Rocca, 2020: 65): this allows much of their complexity to be bracketed out for practical purposes. PPS constitute a limit-case example of complex pathogenesis where the multiplicity and singular patterning of causal factors in each case is such as to make generalisations, if not impossible, then not very useful. The *irreducibility* to ‘a single or few’ causes is what distinguishes the category of PPS from other conditions, and what makes it a phenomenon with ‘paradigmatic force’, that is, an anomaly with the potential to necessitate ‘a large-scale revision of the game-rules according to which natural phenomena are investigated, explained, and predicted’ (Holland and Lande, 2019: 527).

3. Causal dispositionalism

Causal dispositionalism starts from the premise that causality exists in each single case, regardless of whether causes can be generalised to other cases through observed repetition, and in this it differs fundamentally from the biomedical approach to causality. Causes are conceived as ‘dispositions’: properties or qualities that characterise entities – be these objects, living beings, communities, environments, or even abstract entities such as a legal system – in terms of what they can do. The sharpness of a knife is a disposition, as is the fertility of an organism. Whether and how a disposition becomes manifest as the cause of an effect will depend on how it interacts with other dispositions it intersects with. It follows from this approach that 'a major part of causal knowledge will rely on insights into the local context of a unique causal setup' (Anjum, 2020: 31).

Causal dispositionalism is consistent with contemporary explanatory frameworks based on Bayesian models of brain functioning (Friston and Kiebel, 2009), where symptoms are regarded as 'conscious percepts that result from a constructive process, in which the brain interprets information from the body in light of predictions (broadly speaking, expectations) given past experience' (Van den Bergh et al., 2017: 191). This approach yields the important principle that 'physical symptoms, as felt and expressed by patients, are not a direct record of bodily activity, but an inference based on implicit predictions about interoceptive information, derived from prior knowledge' (ibid: 186). The expectations that inform predictions – also referred to as 'priors' in this literature – are examples of *dispositions*. As an approach to the explanation of PPS, however, causal dispositionalism differs from the neuroscientific approach in that it draws explicit attention to dispositions at multiple levels and units of analysis, not limited to the individual brain. This includes the dispositions of social and cultural entities in which individual lives are embedded, which in turn include those of the (bio) medical system. As shared dispositions, these cultural and institutional norms are key to addressing iatrogenic factors in PPS, yet remain 'woefully understudied' (The Lancet, 2024: 2565).

3.1. Narratives: tools for causal inquiry (and active inference)

While Anjum and colleagues advocate methodological pluralism (rather than a single 'gold standard') as a general approach for medicine, they stress the specific epistemological relevance of methods designed to elicit qualitatively rich causal information from patients themselves. From a dispositionalist perspective, patient narratives are an important tool for *causal inquiry* and for providing explanations that are *consistent with scientific understandings of ontological complexity and uniqueness*.

The idea of narratives as a tool for causal inquiry differs in important ways from another, more mainstream and familiar idea: namely, that patient narratives are to be valued as expressive of the subjective experience of illness (as distinct from objective disease), for the purpose of providing care that is more 'humane and effective' in so far as it takes the feelings, preferences, and values of patients into account (Charon, 2001) in the context of a patient- or person-centred model of care (Langberg et al., 2019). This approach to narrative leaves the search for causes and explanations firmly in the domain of the natural sciences and positivist methodologies, informed by the ontological assumptions of biomedicine. While a more 'humane' approach may indeed positively correlate with more 'effective' care, the biomedical model is fundamentally not equipped to explain why this happens.

By contrast, the idea that narratives are tools for causal inquiry can also be read in the context of research on the 'predictive brain'. In that context narratives (of past events) are not only a tool for the clinician wishing to establish the aetiology of symptoms in a patient (i.e. a clinical methodology). They are also a 'tool' through which the individual implicitly 'interprets information from the body in light of predictions … given past experience' (Van den Bergh et al., 2017: 191). In this second sense, narratives are 'priors', or dispositions. This view informs recent accounts of narrative as 'active inference', serving cognitive and social functions of adaptation (Bouizegarene et al., 2024). Narrative practices, Bouizegarene et al. argue, 'enable the acquisition of expectations that conform to local regimes of attention'. Even when they refer to the past, narratives 'are *for the future*' in that they encode predictions that inform perception and action oriented towards the norms of a social context.

We propose that the 'REAL' consultation model of the SCI mobilises narrative in both these senses: the active listening and *recognition* of the patient's story enables the co-construction of *explanations*, or causal narratives. These draw on current scientific understanding of general mechanisms, but in their specific form they are individually truthful and meaningful because they are premised on ac-knowledging the (causal) significance of past events in the patient's unique individual trajectory. When the proposed explanations are embraced by the patient, these then become elements in their evolving self- and illness narrative. In this way, they function at a conscious level as new premises for *action*, and arguably also below the threshold of consciousness as new 'priors' (*learning*) that contribute, at the level of neural processes, to the modulation of symptom perception. In the study protocol for MSS3 these logical steps and the different functions of narrative are not stated explicitly, but they are nevertheless discernible in the description of the overall intervention:

> We developed a model of 'rational explanation', which *enables clinicians to integrate knowledge from processes such as disturbed interoception, with patients' reported experiences*, to develop explanations for symptoms. These rational explanations … leave room for psychosocial influences without placing them as the cause … Rational explanations based on signalling between the brain and the body also open up the possibility of using symptom management techniques which influence interoception and the autonomic nervous system … (Mooney et al., 2022: 2, emphasis added)

While the adoption of symptom management strategies by patients in the intervention arm of the trial is observable and documentable, the suggestion that the intervention may be effective at the level of neural processes in modifying symptom-relevant 'priors' remains speculative. However, the positive results of the intervention (Burton et al., 2024) suggest that this is a concrete possibility, and in what follows we present an analysis of how the structure of the intervention may facilitate and support such a change.

4. Shifting expectations and dispositions: liminality and antistructure

We have argued that explaining PPS and the iatrogenic effects of medical culture rests on adopting assumptions about the nature of causality that differ from those implicit in biomedicine. It follows from the dispositionalist approach that improving symptoms – whatever their distal causes – and countering iatrogenic effects in PPS patients involves intervening to modify dispositions and expectations in the present, including those informed by the norms of biomedicine. The Symptoms Clinic, we propose, achieves this by structuring the consultation(s) so as to actively expand and valorise an experience of liminality.

The concept of liminality has long been used in social studies of serious or chronic illness, usually with a focus on the negative connotations of liminal situations. In contrast with this scholarship, our analysis of the SCI draws on the positive qualities of liminality, or how liminal situations can afford what Victor Turner described as 'the liberation of human capacities of cognition, affect, volition, creativity, etc., from … normative constraints' (1982: 44). Turner developed the concept of liminality by building on the work of Arnold van Gennep (Van Gennep, 1960 [1909]), who used the word *liminal* to designate the middle phase of rites of passage. In what van Gennep called 'the pattern of the rites of passage', the liminal or *transition* rites are typically enacted after the pre-liminal *rites of separation* and before the post-liminal *rites of reincorporation.* Together, these ceremonies serve as a symbolic scaffold for shaping and overseeing the many kinds of *passage* (births, initiations, marriages, deaths etc.) that characterise people's lives in the small-scale societies then studied by anthropologists. Turner was particularly interested in the experiential characteristics and social significance of the liminal phase, and coined the term 'liminality' to designate a mode of experience potentially inherent in *becomings* of all kinds. Liminal rituals, he argued, create conditions for unusual collective experiences characterised by indeterminacy and loss of identity:

> … the ritual subjects in these rites undergo a 'levelling' process, in which signs of their preliminal status are destroyed and signs of the liminal non-status are applied. … In mid-transition the initiands are pushed as far toward uniformity, structural invisibility, and anonymity as possible. (1982: 26).

In the liminal phase, the structures (i.e. roles, identities) which usually support psychic coherence and social coordination are temporarily undone, held in suspense. To convey the atmosphere distinctive of this phase Turner used a concept borrowed from linguistics: liminality feels 'subjunctive', its mood is the mood of possibility, in contrast to the 'indicative' mood of actuality. Liminality enacts 'a world of "as if"' (1982: 83). In the ritual form, pre-liminal rites of separation symbolise this departure from the shared expectations that had structured psychological and social activity during the previous life-phase. Post-liminal rites of reincorporation will reinstate new expectations proper to the new life-phase being entered into. During the liminal rites those involved find themselves in a kind of 'antistructural' limbo in which they are no longer what they were, but not yet what they will be. The rites of passage are thus designed to afford and occasion experiences of *becoming-other*.

If liminality as such is associated with antistructure, dis-order, and chaos, rites of passage are cultural forms that artificially generate experiences of liminality to purposely scramble the order of a previous state of affairs, so as to channel its elements into a new order. The form of ritual and the symbolic elements that comprise it have been described as 'liminal affective technologies', namely artifacts that generate and productively channel experiences of antistructure (Stenner, 2017). For example, in the ritual process the use of symbolic actions, objects, and forms – such as the temporary inversion of hierarchies, the use of divergent rhythm sequences, and much more besides – vectorises an experience of alternative possibilities. With specific reference to healing rituals, Hinton and Kirmayer have described symbolic technologies as 'flexibility primers' or 'shifters', and proposed that 'in conveying a sense of change, healing rituals shift sufferers' mode of being-in-the-world, *including their cognitive, emotional, and physical state or stance*, towards openness to new ways of being' (Hinton and Kirmayer, 2017: 4, emphasis added). Their 'flexibility hypothesis of healing' suggests that the promotion of cognitive and embodied flexibility can be regarded as the common factor across a multiplicity of diverse healing practices and traditions.

Any medical consultation or procedure can in principle be described as a liminal affective technology akin to a ritual. A long tradition of research has used anthropological perspectives on ritual for the analysis of a range of medical settings, particularly in connection with accounting for placebo effects. Placebo studies and ritual theory have been described as 'mutually interpenetrating disciplines' (Kaptchuk, 2011: 1849). In the broad context of this literature, subjunctivity – the mood of possibility that is characteristic of liminality – has been discussed as a resource for the creation of hope and meaning (Frumer, 2017). Notably, operating in a subjunctive mood can maximise the efficacy of even brief clinical encounters, by affording participants a range of interpretive possibilities for their respective roles, thus facilitating a process of collaborative co-construction (Hardman et al., 2020).

This overview allows us to relate liminality theory directly to Anjum, Copeland and Rocca's (2020) dispositional re-thinking of causality. Essentially, dispositions can be viewed as 'structures' and structures as causally efficacious. In the vocabulary of causal dispositionalism, liminal affective technologies – including medical interventions of all kinds – can be understood as socio-cultural means or practices that use 'antistructure' to modify existing dispositions (across bio, psycho, and social levels) for the purpose of facilitating the passage of an embodied subject into a different state and status.

4.1. *Liminality and the experience of PPS*

It should be stressed that liminality is not *inherently* positive or conducive to healing. This is testified by accounts that describe the 'communicative alienation' and existential 'dread' experienced by patients in situations of 'sustained liminality' (Little et al., 1998) and the 'embodied doubt' and narrative 'chaos' engendered by living with 'unexplained' symptoms (Nettleton, 2006). Indeed, liminality is 'both more creative and more destructive than the structural norm' (Turner, 1982: 47). An important distinction thus needs to be made between experiences of liminality that occur in the context of a carefully managed socio-cultural process such as a rite of passage, versus occasions of liminality where the dissolution of order results from unplanned and unexpected events such as illness, conflict, or a natural disaster. In the latter case there is no reason to assume that the dissolution of a previous order will result in a liminal experience of *passage* into a new order (Stenner and De Luca Picione, 2023). The experiences of many patients with PPS might indeed be described as characterised by the *absence of a sense of passage*, or an inability to 'move on' to a new life-phase, steered by the coordinates that a satisfying diagnosis, explanation, or treatment for their illness might provide.

In the case of patients with PPS, the predicament of permanent liminality can at least partly be attributed to the repeated failure of the rituals through which the 'spontaneous' liminality (dis-order, antistructure) of illness is routinely processed within Western societies. When these biomedical rituals fail, they become part of the problem rather than the solution.

5. Enacting liminality in the symptoms clinic

Thus far, we have outlined causal dispositionalism as the theoretical key for reframing the problem of causality in relation to PPS. This affords a broader perspective on causality by actively examining the dispositions of entities including those of the patient, and those of the medical system with which patients interact. We then presented liminality theory, and 'liminal affective technologies' (such as the ritual form) as socio-cultural means for facilitating the transformation of dispositions. In this section we provide an illustration of how the SCI may function as such a catalyst for patients previously 'stuck' in their disorder.

Starting with its overall framing through the acronym 'REAL', the SCI sets itself apart from the conventions that structure routine medical practice. The acronym – as the name of *this* medical ritual – conveys in a single word a fundamental re-orientation of assumptions regarding the ontological status of symptoms: their reality is not in doubt, nor does it need to be objectively verified. 'REAL' does not feature in direct communications with patients, but appears in funding applications, training manuals, scientific publications. It is a powerful symbolic marker addressed to the dispositions of professionals and of the medical system, which tend to regard the reality of symptoms as contingent on the more fundamental reality of disease. As a symbolic marker, 'REAL' is designed to unsettle these systemic dispositions and to channel them in a specific alternative direction.

5.1. *Pre-liminal rites of separation – becoming (un)recognisable*

The first extended consultation similarly sets itself apart from the conventions of a typical medical encounter. For example, consulting practitioners deliberately met patients without having had access to their previous medical notes, and this was made explicit to patients early on in the process:

> D: Today, we've got 45 minutes which is loads of time. So, the deal is I don't know anything about you, I've not got your medical records [right] the deal is – I want to hear your story from start to finish [okay] and then we can start to chew it over and think about what it

> is and what it means and what's going on and then perhaps a way to move forward [right, okay]. So, tell me what's up with you.
>
> (extract from G03017, first consultation)

What we are describing here as the pre-liminal phase of the SCI ritual corresponds to the phase of the intervention guided by the principle of *recognition*. It is striking that the process by which the patient and doctor become recognisable as mutually trustworthy interlocutors in the SCI begins by stripping them of the markers of their previous identity ('I don't know anything about you'). The process of recognition in the SCI is premised on becoming un-recognisable in terms of the conventional norms of classification, evaluation, and practice of the mainstream medical system.

Another norm upturned in the very first moments of the consultation was the convention of starting with an offer of help, that is, with a focus on action and outcome. The MSS3 training manual for GPs advises:

> You should begin with. "Tell me your story" or an equivalent open ended request. Avoid the usual "How can I help you?" For now, you are there to listen. (Burton, 2018: 10)

Foregoing any prior information about the patient and resisting the impulse (or disposition) to be helpful enact a form of 'negative capability': as symbolic acts, they convey an invitation to focus on the here-and-now, to be comfortable with uncertainty and doubt, in an atmosphere of 'receptiveness' (Civitarese, 2019). The manual continues:

> Do not be afraid of silence. You should use it to encourage the patient to fill in the spaces in their account – these patients generally have much to say but may also have experience of what doctors expect to ask and be told. Silence may encourage them to fill in useful details that they have found doctors often ignore. (Burton, 2018: 10)

These acts distinguished the SCI consultation from the routines and atmosphere that patients had come to expect from a typically long history of previous experiences with the medical system. This difference was noted by patients in interviews:

> P: I think going to the clinic [MSS] is different than going to your GP … it's not throwing tablets at you [yeah] they're not trying to diagnose what I've got …
>
> (extract from G14023 interview)

The SCI also differed from mainstream consultations by taking patients' causal explanations seriously, in the broader context of the telling of their story:

> P: she also asked me about how, what I thought had caused the symptoms, caused it in the first place [right] which is quite interesting to be able to think 'oh actually-' and come out with a few things [yeah] but she didn't show any kind of judgement on, she just said 'oh, you know, that sounds interesting' and made a note of them kind of thing-
>
> R: Ok and had you been asked that before?
>
> P: No, never [right] not in a, not in a medical setting
>
> (extract from S19054 interview)

5.2. Liminal rites – have some fun … With 'convincing the brain'

Features that are typical of the liminal phase of rites of passage become discernible as the process of the SCI unfolds. Instead of attempting to reduce uncertainty as quickly as possible by using tests to verify explanations, the SCI expands the liminal phase and dignifies it with value, stalling the typical development of a (bio)medical ritual. The space of uncertainty and doubt becomes a space for entertaining possibilities and for experimenting with imagery and metaphor to find a good explanatory fit. In this process, the task of the SCI clinician – as the 'master of ceremonies' – is to find points of resonance between the patient's story and relevant elements of the scientific explanatory models that inform the intervention. The MSS3 manual makes it clear that explanatory ideas are to be 'proposed' (in the subjunctive mood) rather than delivered or presented (in the indicative mood) as factual information:

> Ideas should be proposed in a way that invites negotiation and discussion rather than immediate acceptance or rejection. A degree of circumspection is appropriate: "It seems to me you could look at it this way"; you should remember that most patients will recall being told formulations in a direct but unhelpful way: "he just said it was stress". They may be expecting you to do the same. (Burton, 2018: 20)

The scientific explanatory models that underpin the SCI can themselves be described as 'liminoid' (Turner, 1982: 33) in so far as they are theoretical and unverifiable through clinical tests. Instead, they are entertained at the level of (often vague) hypotheses:

> D: So it's a bit like say, my last car where it kept just stopping driving you know, the power just would go while you were driving down the street every time I took it to the mechanic they'd run all the tests, say absolutely everything is absolutely fine, there's no parts that I can replace, I can't find anything wrong with that, so nothing that they could do but still it would stop having power half way down the streets, so.
>
> P: Soon as you got back in!
>
> D: Yeah (laugh), so it's not working the way that it was designed to work even though all the parts are how they should be when you just look at them individually. [Right].
>
> (extract from S22068, second consultation)
>
> Or, as in this example:
>
> D: your body's made a judgement about this pain before it gets anywhere near your brain [right] and when this nerve gets to the brain, it splits into loads of little bits, most obviously goes to the bit of the brain that deals with pain, but it also goes to the bit of the brain that deals with mood with energy levels and tiredness and with planning
>
> (extract from G01042, second consultation)

These explanations are not intended to function as accurate, stable, or precise (that is 'indicative') representations of reality. While scientifically plausible, they act rather as cognitive and affective *lures*. While this may be true of all medical explanations offered to patients in clinical interactions, explanations are typically followed – and supported – by a pharmaceutical or other biomedical intervention. In contrast to this, the sustained subjunctive atmosphere of the SCI interaction is one that invites and allows participants to 'go along' with such lures or hypotheses, to explore the possibility of them being true, to act *as if* they are true. In this frame of reference, the absence of a factual or definitive explanation becomes relatively in-consequential – in other words, it is dislodged as a causal factor (or disposition) in the situation, for both patient and clinician.

Similarly, when discussing practical strategies for symptom management, patients were invited to experiment with a range of activities rather than receiving clear-cut prescriptions, and to engage in the mode of 'play' rather than work or duty:

> D: So, do you know; have you got any thoughts what that might be or?
>
> P: I, I just basically need to chill.
>
> D: Have some fun with it, I mean (laugh). So, it could be, do you have a, a spa at the gym you go to or anything?

> (extract from S13005, first consultation)

As with explanations, specific suggestions for possible actions were tentatively proposed, with an attitude of 'try it and see'. In the example below, the openness of the GP towards exploring whether something might work, rather than affirming it would, produced openness in the patient towards a strategy that she had previously rejected:

> I said 'ah, the breathing thing I'm no good at that' you know this thing and he said 'well just try. Try it this way because it might mean this', and I've never found it work ever in my life before and suddenly with that encouragement and that sort of let's see, rather than your 'come into a class, this is how we do it … oh you're a failure, you can't do it'. It was,' well just try it this way, try it that way, do it your own way' and that really worked and it was something I could suddenly use. It was a tool.
>
> (extract from S10004 interview)

Lastly, liminal rites and situations are notably characterised by a tolerance of paradox, or by the fact that alternatives that would seem mutually exclusive under ordinary circumstances are held as simultaneously (im)possible: liminality is the dimension of 'both/and' *and* 'neither/nor'. The explanations provided in the SCI interpellated patients in such a paradoxical way. Here, for example, the patient was simultaneously identified with their 'brain' and yet distinguished from it:

> D: The other things that we can do is because this is all set up on the fight or flight thing, you know there's danger, we need to be alert all the time [yeah yeah], something that we can do is try and break that cycle by convincing the brain that actually you're more relaxed, see what I mean? So and that would be … either using relaxation techniques or breathing techniques.
>
> (extract from S20002, second consultation)

The alternative between (agentic, free-willing) 'me' and 'my (physical) brain' no longer appeared as a causal either/or. Instead, the patient was addressed as embodying a multiplicity of agencies, sometimes in contradiction with each other. The context of the intervention both produced and contained this dissolution of self-identity and the resulting indeterminacy – which could therefore be tolerated, played and experimented with. This made it possible for the patient to relinquish their previous perspective on the situation, to inhabit multiple perspectives simultaneously, and to conceive the plan of 'convincing [their] brain that actually [they] are more relaxed'. It should be stressed that this was not a case of simply reversing a linear causal attribution for the symptoms – from the morally responsible 'mind', to the physical (by definition blameless) 'brain'. In this, the SCI process differs from one of simply providing a brain-based, biomedical explanation. The zone of liminality allows for the attribution of causality and agency to remain ambiguous and paradoxical: the patient can become responsible because they are blameless (not either/or, but both/and). Implicit in this process is a shift in dispositions at multiple levels: at a purely cognitive level, instead of their status being limited to that of 'passive sufferer', the patient is now simultaneously the 'active healer'. Furthermore, through the application of the proposed relaxation or breathing techniques, the shifting of patterns or dispositions of neurophysiological (dys)regulation also becomes possible.

5.3. Post-liminal rites of incorporation – 'gather up all the chaos'

The post-liminal rites of incorporation in the SCI correspond broadly to the last element of the intervention, the one associated with *learning*. Having experienced *recognition*, engaged in *explanation*, and explored possibilities for *action*, patients were invited to reflect on whether the intervention had helped in any way, or what had changed for them as a result of it. In many examples, the 'learning' reported by patients pointed to a change in outlook and narrative:

> I would not have come to these realizations had I not come to, to be part of this. And the reason for that is that particularly people like me, but I would imagine anybody with this type of condition, always thinks that they've either got something else, or there's something that's causing it. And the more you read, and the more you look at things on the Internet and that, the, there are all kinds of explanations for these conditions … but actually this is what you've got and there's no magic pill I can take. And that takes time [it does]. And it takes knowledge about the particular condition. And I think it needs to be separated from, I couldn't have done this with, er, not just from a time perspective but from that scrutiny, and go away and do this. You know [mmm], the holistic piece of it.
>
> (extract from G03002, fourth consultation)
>
> for me it's been useful to learn about the nerves and things as well. But I just feel like I need, not let it kind of control my life really.
>
> (extract from G03017, fourth consultation)

As these quotations illustrate, a significant benefit of the intervention was the sense of being freed from the compulsion to search for an ultimate answer and cure. More than a purely cognitive shift, this must be understood as a significant difference in the proleptic orientation of the patient's embodied experience – a veritable 'liberation of [their] capacities of cognition, affect, volition, creativity' (Turner, 1982: 44) from the constraint of seeking to restore the order of a previous life. In the case of at least one patient, this resulted in decisions to fundamentally alter their situation, as recalled by this GP:

> the next time she came back and said "I listened to what you said and I stopped doing that and now I'm now looking forward to the future, I handed in my notice in at work I've joined a walking group." … This is kind of unbelievably transformative for her
>
> (GP04 Interview)

In any rite of passage, the rites of 'reincorporation' imply such a change in proleptic orientation, that is, a re-alignment of expectations away from those associated with a previous state or status, towards a new or future status. In the context of the SCI the 'reincorporation' can also be understood literally, as involving a cognitive and affective re-alignment with the needs and capacities of the body – regardless of the continued presence of symptoms, which recede from the foreground as a dominant concern:

> D: The sleeps gone down from a four, which is very very hard to get to sleep right down to a one
>
> P: Yeah and that was the breathing, I found that in the first week of just doing the breathing as a random side-effect
>
> D: You've been practising that?
>
> P: Well every night in bed I do it … I've been telling everyone else to do it as well (participant laughs)
>
> (extract from S17072, fourth consultation)

Some of the language used by patients in interviews following the intervention also evokes an almost literal experience of 'reincorporation', that is, an experience of (re)creating a coherent unity where this had previously been disrupted:

> to open up and gather up all of the chaos and for him to just pick out the bits which would be useful and concentrate on, that really helped, yeah
>
> It suddenly made me think of myself as much more whole than even I had imagined.
>
> (extract from S10004 interview)

6. Discussion and conclusion

Our aim in this paper has been to present the significance of the SCI as an *epistemic event*. The SCI has been tested using the 'gold standard' method in mainstream biomedicine – a randomised controlled trial (MSS3) – that has demonstrated a significant improvement of symptoms sustained after 12 months (Burton et al., 2024). Our analysis has offered a novel theoretical frame to account for this primary finding of the MSS3 trial. Drawing on causal dispositionalism and on liminality theory, we have argued that a carefully crafted experience of liminality can catalyse therapeutic change by shifting sedimented dispositions even in the context of a relatively brief and time-limited intervention such as the SCI. If this interpretation is plausible it suggests that the SCI works by enacting a dispositional model of causality, which differs significantly from the one implicit in the epistemic structure of biomedicine. We have argued that this approach is compatible with the most current, neuroscientific frameworks for the explanation of symptom disorders (which underpin the development of the SCI) – while being emphatically less reductive in pointing to the relevance of factors beyond the individual brain and patient, including the dispositions of the (bio)medical system and of clinicians as its operators.

If we are to understand the efficacy of the SCI along the lines we propose, it is important to recognise that these therapeutic effects occur in (and are likely dependent on) a specific context: namely, the type of occasion that is staged through the 4-consultation structure and the overt aims of achieving *Recognition*, *Explanation*, *Action*, *Learning*. Our analysis suggests that these elements are conceived and enacted so as to allow play and experimentation with hypotheses, in an atmosphere characterised by tolerance of ambiguity, uncertainty, and even paradox. Together, patient and clinician are engaged in the co-creation of an extra-ordinary spacetime that facilitates and 'indulges' the entertainment of alternatives to the status quo. At both a cognitive and a practical level this occurs in the subjunctive register of potentialities ('try it and see') that also reframes what is at stake in the possibility of error. Taken altogether, these features might be described as a distinctive therapeutic *ethos*, one that stands in a tense relationship with the scientific ethos of biomedicine. In contrast to the overt and structural elements of the intervention (which have been successfully trialled), the question of whether and how this ethos may be amenable to codification and standardisation remains open for future research.

A further insight that emerges from this discussion is that the SCI becomes efficacious as more than the sum of its parts, which suggests that these would produce very different effects outside the frame provided by the SCI ritual. Crucially, a commitment to brain-based explanations for symptoms, if expressed and delivered in the 'indicative' mode, could yield a very different set of expectations and consequences with respect to the ones we witnessed in the SCI.

We conclude by noting that the SCI illustrates, and is part of, broader cultural and scientific developments that are transforming the understanding of symptoms and their medical significance (see Toussaint et al., 2025). Increasingly this should allow us to legitimise and treat PPS in a way that is satisfying to both patients and clinicians.

CRediT authorship contribution statement

Monica Greco: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Vincent Deary:** Writing – review & editing, Funding acquisition, Conceptualization. **Kate Fryer:** Writing – review & editing, Investigation, Formal analysis, Data curation. **Tom Sanders:** Writing – review & editing, Methodology, Formal analysis. **Christopher Burton:** Writing – review & editing, Methodology, Investigation, Funding acquisition, Conceptualization.

Ethics approval statement

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Data availability

Data will be made available on request.

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