

## Perceptions of Spatiality: Supramodal Meanings and Metaphors in Therapeutic Environments

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### Abstract

*This paper explores the perceptions of the spatiality of individuals who self-harm, with the aim of understanding the design aspects which foster supportive therapeutic environments. Analysis of responses found that there were key similarities in areas of perception of architectural interior space, refuting the commonly held view that all architectural response is purely subjective, and that subjective experience cannot be shared. Three examples of perceptions of interior therapeutic environments are discussed to highlight how the perceptions of spatiality of individuals who self-harm consists of a particular cluster of spatial understandings, behaviours and focuses, manifesting as a strong emotional overtone overlaid onto built environments. This includes common kinds of triggers and emotional reactions provoked by aspects of the built environment. This paper discusses architectural aspects in relation to subjectivity in perception, constructs of interiority, and the role of supramodal engagement in influencing perceptual responses to interior space. By understanding how individuals who self-harm experience a space, a greater comprehension of the design of these environments delivering mental health services may be enabled. This paper tables a series of research-derived design suggestions to facilitate supportive therapeutic spaces. This paper also proposes a series of further research directions to explore the relationships between constructs of interiority, the physical interior space, and the therapeutic function for which they are designed.*

*Keywords: self-harm, therapy, built environment, interiority, interior design*

## Introduction

There is a considerable body of literature affirming links between mental wellbeing and good design practice. Evaluations of specific design interventions have shown that good design of clinical and treatment environments leads to better clinical outcomes and less stress for the users; both patients and staff (Marberry, 2006; Ulrich, Zimring, Quan, & Joseph, 2004). Research also exists which illustrates how the design of environments for therapy and counselling can affect therapeutic delivery (Lecomte, Bernstein, & Dumont, 1981; Pearson & Wilson, 2012). The counselling environment is regarded within the clinical literature as having an effect on a service user's<sup>1</sup> sense of wellbeing (Gross, Sasson, Zarhy, & Zohar, 1998; Ulrich et al., 2008). Service users' experience of such spaces can have a highly emotional dimension (Pressly & Heesacker, 2001) which is suggestive that environment design should be investigated as a potential means to influence therapeutic efficacy. Further, individuals have differing abilities to censor or suppress their environments (Dijkstra, Pieterse, & Pruyn, 2008) and a stressed patient has reduced capacity to exclude environmental distractions (Samuelson & Lindauer, 1976). This suggests that the environment of a counselling room may have more impact for these individuals who often arrive in a distressed state. Research exists linking the design of counselling spaces to communication and patient self-disclosure (McLeod & Machin, 1998; Vossler, 2012). This highlights the potential significance of the physical design of interior spaces which are delivering mental health services.

Scholarship examining interiority explains it as distinct from the interior, pertaining instead to an individual's inner life; it is a condition of inwardness and individual contemplation (Pimlott, 2018). Interiority is the sum of projections and receptions; it is "a realm of illusions... wherein spaces, settlements and territories are ideological realms of constructed narratives and imagery" (Pimlott, 2018, p. 5). Interiority is fluid, graduated and temporal (Sadar, 2018), and shaped by the totality of the attributes in an interior environment stimulating the perceptual system. Architects and designers employ a myriad of techniques to construct and shape interiority. Such strategies might explore manipulations of light and shadow (Bille, Bjerregaard, & Sorensen, 2015; Edensor, 2015), visual material (Biehl-Missal, 2012; Edensor, 2005), smell (Hudson, 2015), decay (DeSilvey, 2006; Turner & Peters, 2015), and the configuration of material assemblages (Anderson & Wylie, 2009). Interiority also imbues within it environmental affordance, that is, the awareness

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<sup>1</sup> The term 'service user' is used within this paper referring to the individuals who are clients of mental health service delivery.

of the potentials for bodily action that are permitted or provoked (Gibson, 1979). As Gibson explains, the perception of affordances is embodied, not reflective, therefore when presented with objects or spaces, we perceive the opportunities for engagement or bodily acting, not simply the physical attributes.

The concept of interiority can serve as a device which disrupts normative ontological categories, suggesting a blurring of presence and absence, being and non-being, self and other. Such fluid and less distinguishable experiences “provide a realm in which sensual experience and performance is cajoled into unfamiliar enactments which coerce encounters with unfamiliar things and their affordances” (Edensor, 2005, p. 325) and emerge as one body affects another (Massumi, 2002). Scholars affirm the links between interiority and atmospheres; the term ‘atmosphere’ is used here as it is used by Gernot Bohme (1993) to mean the interstitial condition binding subjects with objects. “Atmospheres may be thought to confound any straightforward appeal to either subjective or objective accounts” (Kidd & Smitheram, 2014, p. 84) and are thus implicated in the fostering of transformative, ephemeral experiences which form interiority.

Scholars explain how particular atmospheres can encourage a paradigm shift in the inhabitants. By creating discontinuities in one’s experience of the world, atmospheres can be a catalyst for reconstructions of one’s conceptualization of interiority, space and encounter. This allows one “to reflect on affective experience as occurring beyond, around, and alongside the formation of subjectivity” (Anderson, 2009, p. 77). Thibaud (2001) explores this notion in urban space, whereby discontinuities in experience manifest a disruption in perception, encouraging a reformulation of ways of seeing the world. We might argue then that interiority, which is imbued with affective atmospheres (Sadar, 2018), may encourage inhabitants to encounter other repertoires beyond their conventional, typical ways of experiencing and perceiving. The factors contributing to constructions of interiority are thus worthy of investigation, as “the kinds of freedom produced by interiority reside in the possibilities for reflection that are produced by an environment” (Pimlott, 2018, p. 8). It is perhaps pertinent that research considers the sensuous interactions between people, places and things as affective interiority, capable of provoking experiences which may not be straightforwardly instrumental but may be a catalyst for new awareness and an exploratory tool for manoeuvring social intersections and affective manipulations.

This paper reports on a study which examined the perceptions of the spatiality of individuals who are being treated for self-harm,<sup>2</sup> and what role design can have in enhancing the therapeutic experience for these particular service users. The perceptions of spatiality examined in this study are inclusive of two definitions; cognitive constructions of physical environments and the sum of psychological responses in socio-physical environments, which is cognitive and affective. The research thus focuses on the investigation of service users' psycho-cognitive understandings of space, and how perceptions related to spatial structuring and/or interactions with physical environments might be differently framed, such as through a hypersensitivity in affective dimensions, or to personal affective triggers in environments.<sup>3</sup>

### Methodology

Fieldwork undertaken by the author involved a series of focused interviews with 12 service users of mental health services, 12 practicing therapists/counsellors, 3 carers of loved ones with a mental illness, 4 architects/designers who practice in the field of designing built environments for mental health; and 5 design experts/researchers who work and research in the field of design for mental health.<sup>4</sup> The interviews lasted from forty minutes to ninety minutes depending on interviewee's responses to interview questions. For in-depth interviews, as were undertaken, the number of interview respondents were deemed significant enough to draw substantial conclusions (Attride-Stirling, 2001).

The methodology was informed by the work of Aya Bader, exploring applied phenomenological research (Bader, 2015), Aron Gurwitsch's investigations of the relationship between phenomenology and Gestalt psychology (Gurwitsch, 1966), P. Sven Arvidson who studies attention transformations (Arvidson, 2006), and Moustakas'

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<sup>2</sup> Within this paper, self-harm is conceived of as the physical harming of the body without suicidal intent. This involves a physical wounding of the body tissues. More broad definitions of what may constitute self-harm, such as eating disorders, tobacco smoking, alcohol abuse, or some forms of tattooing, and correlated but clinically separate conditions, such as depression, are not considered part of this research.

<sup>3</sup> The idea of there being spatial or built environment perceptions peculiar to individuals who self-harm does not exclude the notion that other individuals, not in the group upon which this research focuses, may share at least some characteristics with this group, and does not imply that an individual who self-harms may think or perceive exactly the same as another.

<sup>4</sup> Whilst all participant group data was utilised to inform the analysis and development of research findings, this paper predominantly includes quotes from service user participants in order to foster the inclusion of the service user voice with greater clarity and emphasis.

modifications of Van Kaam's method of analyzing phenomenological data (Moustakas, 1994). Building upon Gurwitsch's work, Arvidson suggests that focal attention, contextual and marginal consciousness are co-present, whereby meaningful perception will be derived from the context of things and from marginal awareness, not only the thing itself. These differing states of attention, Bader (2015) argues, "bear equal importance in delivering essential knowledge and meaning... [and further] that which is at the periphery of perception also has meaning. This is crucially significant for the study of architectural experience" (p. 247). The analysis of the research reported in this paper aligns with Bader's methodology, which aimed to capture and analyse both the aspects of architecture that can be attentively described and also those which are inattentively perceived. By first asking the architectural user-perceiver to describe their lived experience of therapeutic environments, and then analyzing the intrinsic properties of their account, and comparing it with other such accounts, "we can discover repetitive elements that may reveal the common foundations of the experience" (Bader, 2015, p. 247).

A complete transcription of each interview participant was recorded, followed by undertaking a coding of the data to begin the content analysis (arising from the text itself, without implying external terms and concepts). In the coding process, the content of each transcript was closely examined, participant quotations interpreted, and key themes noted. The identification of themes developed from clusters of invariant, related constituents of experience, informed by investigation repetitions, typologies or categories, metaphors and analogies, transitions, similarities and differences, linguistic connectors, missing data, and theory related material (Ryan & Bernard, 2003). The key themes were compared in order to provide an integration of the themes and concepts. The themes were then arranged into basic, organizing and global themes illustrated as a thematic network. This network was employed in a re-reading of the interview material in order to synthesise results.

Findings were subsequently compared with prominent theoretical concepts, which explore the ways in which architectural experiences attain meaning, and the mechanisms by which this operates. This included, but was not limited to, aspects of inside/outside relations (Bachelard, 1969); materials, texture and weight (Thiis-Evensen, 1989), multi-sensual architectural experiences (Holl & Pallasmaa, 1994), territories (Goffman, 1974), personalization of space (Cooper Marcus, 2006), spaciousness versus confined spaces (Bohme, 2006); movement, circulation and atmosphere (Pallasmaa, 2014b); boundary conditions and their manifestation (Altman, 1975); and perceptions of privacy (Altman, 1975). This informed the development of findings

relative to spatial perception, interiority, and implications for the design of environments to best support the function of therapy.

### Results

This study found that the perceptions of the spatiality of individuals who self-harm consisted of a particular cluster of spatial understandings, behaviours and focuses, manifesting as a strong emotional overtone overlaid onto built environments. This also included common kinds of triggers and emotional reactions provoked by aspects of the built environment. Different service users evidenced a sharing of this cluster of spatial understandings, behaviours and focuses, with striking similarities. This paper thus refutes the commonly held view that all architectural response is purely subjective, and that subjective experiences cannot be shared.

Researchers note how

the notions of 'exposure'/'exposed' and its opposite, 'closed'/'hidden', along with such terms as 'confusion'/'warmth', etc., are all employed as emotional-mental judgements that in effect pertain to 'whether or not I feel comfortable.' Hence the mental contents of the experience do not always match its physical contents. (Bader, 2015, p. 261)

Such researchers discuss how architectural encounters contain emotional responses, attitudes and evaluations which are products of the built environment and individual evocations and memories. Finnish architect and theorist Pallasmaa (2014a) notes how "the immediate judgement of the character of space calls for our entire embodied sense, and it is perceived in a diffuse and peripheral manner rather than through precise and conscious observation" (p. 231). However, researchers exploring the perception of architectural space are now recognising that there are some factors which may cause synchronicity in architectural experience.

The multisensory nature of architectural encounter and embodiment is prominent in Wolflin's theories (Wolflin, 1886), yet the exact role and interplay of factors influencing architectural experience are still under investigation. Overall, the study evidenced how inhabiting space visually (sans touch) cues a variety of other bodily percepts and emotional responses, some which demonstrated clear similarities across participant responses, and others which were perceived with notable diversity. This paper turns to the concept of supramodality to discuss this further. Pallasmaa (2005) hypothesises the existence of an "unconscious tactile ingredient in vision" (p. 5) exalting touch as the primordial sensory modality. He suggests that touch and vision are intrinsically interwoven in the manner in which architectural space

is encountered and that it is “through simultaneous multi-sensory sensing” (Pallasmaa, 2012, p. 6) that complex spatial atmospheres, and constructs of interiority, can be understood and interrogated.

Neuroscience discusses spatial information and spatial representations in this way as supramodal representations; supramodality has been shown to be involved in integrated semantic representations and affective processing relating to action understanding, emotional functioning and social interactions, among others (Handjaras et al., 2016; Leo et al., 2016). According to this perspective, elements of architectural encounters may be processed by the brain in a sensory-modality independent manner. For example, Rasmussen (1964) claimed that looking at the surface of a wall could evoke weightiness or lightness, hardness or softness. Pallasmaa (2005) also discusses architectural stimuli as having olfactory, tactile or other sensory inferences and experiences. Here, vision is not solely responsible for architectural experience and appraisal. Supramodality implies a more comprehensive descriptor of embodied architectural experiences and the sensory intensification of architectural consideration (Van Kreijl, 2008). Not limited to a singular sensory modality, supramodal experiences move beyond immediate sensory experiences to more abstract representations involving semantic and emotional processing (Papale, Chiesi, Rampinini, Pietrini, & Ricciardi, 2016). This may also be more intrinsically linked with the embodied presence (Bracewell, Wimperis, & Wing, 2008; Slater, Perez-Marcos, Ehrsson, & Sanchez-Vives, 2009).

The common thread of supramodal cues linking to interior environments was evident in this study. Three examples of synchronous meanings and metaphors contained within therapeutic interior space are the subject of this paper, used to highlight the similarities in the way in which the interior spaces are perceived, and the implications for the design of therapeutic environments. These examples include a natural mind-space, adjacent to the counselling space and accessed only visually, a uni-directional metaphor of circulation, and traces of inhabitation. Each of these examples is discussed below, as they were reflected upon by interview participants, and presented with reference to wider clinical and theoretical literature to aid the analysis.

#### *Natural mind-space*

A view through a window to a natural landscape adjacent to the counselling space was found to be very significant for individuals who self-harm in the fieldwork undertaken by the author.

Having that view out to a landscape, it's been important

through my whole stages of treatment... I didn't realise until I didn't have that safe view from a window, and I think that is probably part of the reason I didn't continue in some ways, because as I said it was so confrontational, I had nowhere to look, I felt totally judged and I just didn't feel safe. (Service user, 2015, Personal communication)

It seems that this landscape is not important to occupy physically and that visual access provides the sense of escapism or mental respite which is desired:

In the counselling I would need a window to feel safe, to "Oh, there's a world out there!" You know? There's a world out there and I might not feel safe in the physical area I am in, but it's OK. It gives me a psychological connection to a bigger space, to a world outside what I am dealing with. (Service user, 2015, Personal communication)

However, it seems that a large expansive view of an unframed landscape is perceived as threatening, rather than supportive. The notion of a framed landscape as providing a greater sense of freedom and comfort simultaneously is echoed by several service users, who discuss how the connection to nature in a contained way allows them to maintain a sense of protection and control through the borders or framing of the natural space. Practising therapists also acknowledge that "landscapes and views to nature allows you [the service user] a sense of escapism" (Therapist, 2015, Personal communication) and yet "a vast expanse is going to allow you to go too far, and might be threatening" (Therapist, 2015, Personal communication). It is noted by another practising therapist how a sense of boundedness might also afford a psychological kind of privacy, which is important to therapeutic processes:

The containment [around a natural space] demarcates that this is a sacred kind of space, and it respects people's privacy, so what we are talking about here is just between us, and I think if it was just in the middle of a field it might feel unsafe... [it is important to have containment] when a client is talking about things that might make them feel vulnerable or exposed. Having an uncontained landscape would just exacerbate that feeling of vulnerability (Therapist, 2015, Personal communication)

The clinical literature describes how self-injury is often a means by which individual aims to reassert a sense of control and to quell anxiety (Edmondson, Brennan, & House, 2016). These individuals also often seek experiences of high sensation in order to root themselves in the sense of stability (Levitt, Sanson, & Cohn, 2004)

and to feel in control (Briggs, Lemma, & Crouch, 2008). This may explain why an unbounded landscape is threatening, as it relates to constructs of control, and may be more difficult to 'come back from.'

Studies in healthcare environments generate strong evidence of the stress-reducing benefits of real or simulated views of nature or natural elements, and this manifests in positive emotional, psychological and physiological changes (Hartig, Book, Garvill, Olsson, & Garling, 1995; Ulrich, 1999). However, this study evidences striking similarities in self-reported supramodal spatial encounters. Service users explain how visual access to nature creates a sense of safety, specifically in relation to a particular dual manifestation of containment and mental escape. A bounded landscape, accessed visually and occupied only by the mind, is calming, whereas an unbounded landscape is threatening. Visual experiences are more than simple views but have effects on psychological states, willingness to engage in therapeutic activities, implications for psychological comfort, privacy and safety.

For the service users in therapeutic environments, boundary conditions are operating to affect constructs of interiority, where "limits are barriers" (Bachelard, 1969, p. 215). Geometries of enclosure exude a sense of interiority. Such forms of architectural matter or bounding natural elements embrace, entrap, limit and protect, operating "to enclose rather than direct space" (Venturi, 1977, p. 70). The boundary condition of the natural mind-space itself is inhospitable but serves to delineate between conditions of exteriority and interiority. The boundary of the natural mind-space in a sense acts as Colomina's horizon: "the horizon is an interior. It defines an enclosure... it marks a limit to the space of what can be seen, which is to say, it organizes the visual space into an interior" (Colomina, 1995-1996). This visual space serves as a protected, exclusive space for the mind of the service user. This has implications for notions of privacy and psychological safety. Conversely, absences of such view to natural mind-space forces the service user to turn toward interiority, locating interiority as frontal, confrontational and charged with a psychological "extinction of space" (Kristeva, 1982, p. 3), which is therapeutically damaging.

#### *Uni-directional metaphor*

The notion of a uni-directional spatial journey was also raised as being significant by individuals in treatment for self-harm. As one explains:

It's kind of yucky to walk out the same way you came in if you are distressed. There should be a distressed door [an exit to use when feeling distressed after a counselling session],

where you can't be seen, and can leave that's different to the entry. (Service user, 2015, Personal communication)

It seems there is a metaphor of progress made spatially, and to backtrack and repeat earlier steps is not conducive to or representative of therapeutic development. A practising therapist reflects on this:

So you step out of the counselling space and if it is somewhere where you have just been, it doesn't totally make sense [to reverse your journey] and I can see why someone could feel like it is a little bit of a backtrack, and you are just back where you started... if a certain behaviour environment represents something to someone, we need to listen to that and understand that it is really beneficial. (Therapist, 2015, Personal communication).

The service users' supramodal experiences of interior space extend beyond vision to include consistent metaphoric content. The service users report messages of progress manifest spatially, cued by architectural layout and egress, which make apparent one's demonstration of therapeutic advancement, or lack thereof. The journey metaphors constructed can be linked to Merleau-Ponty's concepts of primordial depth, that is, the way an arrangement of objects, uniquely characterised by envelopment or overlap, contribute to the understanding of depth in space (Merleau-Ponty, 1962). In a journey of counselling, as described by service users, the architectural spaces are continually being revealed. This is not a singular occurrence but rather a continuum of experience, and a constant reassessment of one's relationship with the world and place in it. Movement is key to the revealing of space, contributing to constructs of spatiality, and how physical surroundings are divulged (Leatherbarrow, 2009). The service users construct the spatiality of their journey through embodied and sensory-motor experiences, and objects of marginal consciousness, which is then overlaid with metaphoric cues signalling meanings of their therapeutic progression or regression. Stages of the journey are marked through experiencing differing spatial realms, denoted by perceived changes, such as light and shadow, sound levels and privacy, all of which are absorbed through a supramodal experience. This has implications for the service users' constructs of interiority, and design aspects which designers may choose to manipulate in order to foster supportive therapeutic experiences.

#### *Traces of inhabitation*

Spatial metaphors are evident in notions of the trace within interior environments. The service users discussed poignantly how signs of user inhabitation or trace prior to their own occupation of the space

were confronting, triggering anxiety and possible self-harming. In the most simple sense, signs of violence provoked anxiety. For example, visible holes in the walls as evidence of when others may have punched through was triggering and made the service users feel unsafe. As explained, you cannot feel safe or put your own identity on a space when “there are marks of other people being there” (Service user, 2015, Personal communication). On a deeper level, traces were also triggering to individuals who self-harm as they served as a reminder of the past service users and their trauma made present in the space. A service user reflected:

Making sure the space doesn't show inhabitation or trace of other people's experience, that is really important for me. Cleanliness, I remember once [in a different counsellor's office] I couldn't stand it because I could see cracks in the plaster, and all of that again brought up the idea of ageing or old or must, so that really set me off. (Service user, 2015, Personal communication)

This service user also explained how smells related to trace were a trigger of deep-seated memories, and that her experience of this in the built environment would dictate where she sat and how she related to people. Here the service users are perceiving their environment as a vessel of past inhabitation. To the service users, traces bring the connotation of other people and their therapeutic intimacy. It is this perceived intimacy which is confronting:

Even in the waiting room, the chairs that were vinyl, you could almost see the cheek impression and I don't know if they were cheap vinyl chairs; it is an intimacy that I wasn't comfortable with. (Service user, 2015, Personal communication)

Another service user discussed trace in relation to carpets and soft furnishings:

Carpet holds smells and carpet holds the memories of other people and upholstery holds the same, especially when you start to see it is worn on the edges or on the arms, and you know other people have been there, so things that don't show trace, that is important. (Service user, 2015, Personal communication)

The service users also recognise that they are perceiving space in relation to the presence of another. The issues they have discussed in the space are manifest and made physical through their traces. This is confronting, as they feel they then must sit in the space which is already psychologically full of the issues of all of the service users who have left their trace in the room, and then there is no room for

them and what issues they may need to address in the space. Further, this trace of past inhabitation also makes them feel as though they must contain all of the issues from the past inhabitants, in addition to their own. This is psychologically provocative and challenging:

You have your own problems, you don't want to be having to deal with other people and how they feel and their emotions... I am already at max capacity... you have just got too much of your own stuff to tolerate stuff from other people, to tolerate it comfortably. (Service user, 2015, Personal communication).

This is suggestive of a particular construction of interiority, whereby service users are perceiving the space as a container of emotions and issues, through traces of past inhabitation, and this reduces their own opportunities to voice and unpack their issues in the space.

Existing literature explains the role of traces and residues in signalling aspects of prior occupation and occurrences (Graham, Gosling, & Travis, 2015; Zeisel, 2006). This paper argues that traces in therapeutic spaces are influencing the boundary condition in relation to the service users' constructs of interiority. Traces are a point of transition, "a sudden jarring into somewhere else, into another place, another spatial or temporal condition" (McCarthy, 2005, pp. 114-115). As Heidegger (1971) notes, the boundary of interiority is also "not that at which something stops, but... is that from which something begins its presencing" (p. 154). The "boundary is neither outside nor inside; rather... it partakes of both... [it] comes into contact with what lies on both sides of it" (Kingwell, 2003, p. 1).

Traces contact both past and present service users and traverse between self and other, by stimulating the volatility of the boundary condition. Here the trace acts as "a point of transit and transportation" (McCarthy, 2005, p. 115) or indeed, as a "departure point for fantasy" (Bloomer & Moore, 1977, p. 3) regarding what is other. Traces are at once a device for containment and a connection to otherness. Traces in the therapeutic space can become a device for entrapment by allowing an illicit intrusion, a "fearful invasion of an alien presence" (Vidler, 1999, p. 3). Interiority forces intimacy due to the impossibility of separation or personal distance (Treadwell, 2005), yet "interiority does not guarantee safety in its intimacy, nor necessarily its pleasure" (McCarthy, 2005, p. 117). In the therapeutic space, traces are bringing together two (or more) bodies, compressing time and "recalling the impossibility of forgetting previous occupancies" (Treadwell, 2005, p. 223). Traces deny simple and obedient boundary conditions and, as Rault (2005) would argue,

dismantle conventional understandings of interiority as a simple and straight-forward 'containment.' Thus, traces extend temporal territories and serve to construct and re-construct interiority, and associated transformations of spatial incarnation, psychological safety and crossing of bodies.

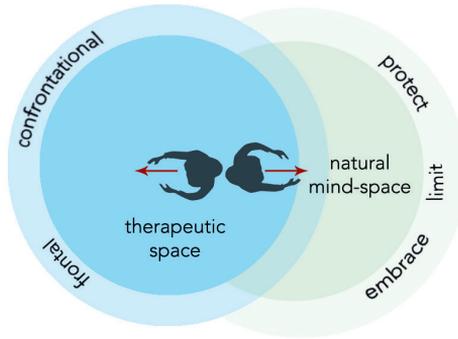


Figure 1  
Exploring  
boundary  
conditions and the  
natural mind-space

This paper has discussed the role of supramodal representations in influencing perceptual responses to interior space. This paper has explored the contribution of architectural therapeutic space to the process of internal subject formation. It has analysed the role of the body, supramodal experiences and space in the formation of psychic interiority. The clusters of spatial understandings of service users discussed in this paper underpin three key findings: (1) the significance of boundary conditions of interiority to psychological experiences and engagement in therapy (see Figure 1 and 2); (2) the interactions between multiple actors (and their traces) in space impacting temporal dimensions and therapeutic engagement (see Figure 2); and (3) the overlap of arrangement of objects, movement and embodied supramodal experiences fostering constructs of spatial depth and journey metaphors (see Figure 3).

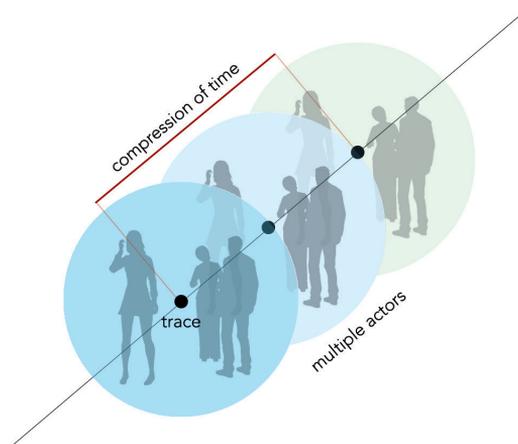


Figure 2  
Interactions  
between  
actors, traces,  
and temporal  
dimensions

Within therapeutic space, interiority is not simply a container of privileged elements, but a site for transformations of inclusion and exclusion, temporal compression, and interactions between users, past and present and their traces. Through the analysis of interview data, and the corresponding re-reading through theoretical lenses, this study developed several design suggestions which may be examined in the design of therapeutic spaces (see Tables 1 to 3). These suggestions are tabled not as a definitive list of strategies but as a platform upon which future research may build and interrogate.

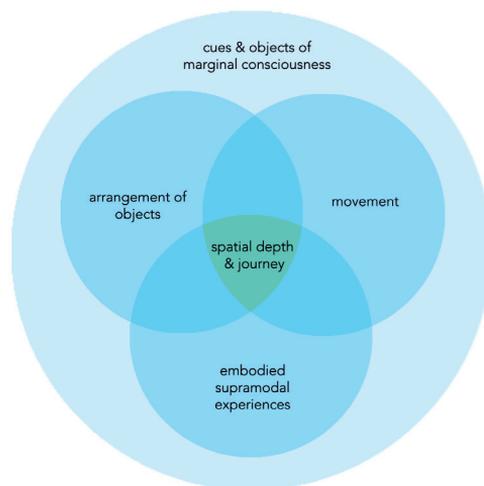


Figure 3  
Constructs of  
spatial depth  
and journey  
metaphors

### Conclusions and Future Research Directions

This study highlights the need for a deeper understanding of the processing and integration of multiple sensory modalities in environmental perception and appraisal, in order to best comprehend service user perceptions of spatiality in therapeutic environments. Further research is required in relation to dissecting the role of each sensory modality in processing spatial information and further characterising which visual and haptic cues evoke similar percepts. Such research requires clarity in relation to the terms used and the development of empirical measurements, and a multi-disciplinary approach in order to foster evidence-based demonstrations of knowledge acquisition. The common thread of supramodal cues linking to architectural aspects was evidenced in this study, helping participants to both identify and describe architectural space, and to arrive at a reasonable consensus in their subjective perceptions. This study evidences similarities within supramodal experiences of individuals who self-harm, their processing of spatial information and their constructing of interiority.

### To facilitate a natural mind-space

Include a natural area adjacent to the therapeutic space, accessed only visually. The view of nature is privileged; the natural space must be directly adjacent to the therapeutic space. The nature area is framed or bordered (such as an enclosed courtyard, an open area with a surrounding hedge, tree-lined (evergreen) to ensure the service user seated in the therapeutic space does not have an extended view of an unframed landscape (consider clear spatial boundaries). This unbounded view was found to be threatening.

The nature area cannot be accessed. It must be enclosed and private to allow it to be occupied by the mind – ensure entry points are not seen from the therapeutic space.

Consider the configuration of space and where therapeutic space is situated, in order to obtain the desired view.

Glazing on exterior walls and doors down to the floor may also be considered to allow a view of the ground when seated. This allows the ground to become a continuation of the floor in the room, provides a greater feeling of spaciousness, and ensures the service user has views to outside for mental escape.

A wide variety of materials and textures is emphasised. Minimise clinical references in material choice (e.g. plastic curtains, linoleum, artificial materials) which was found to be distressing. A rich material palate promotes sensory stimulation.

Use darker coloured walls to frame an exterior view; this was found to be more calming and intimate.

### Relating to spatial metaphor

Consider the differentiation of spatial boundaries within a journey of counselling.

Manipulations of light, sound, materials, privacy levels, arrangement of objects, spatial volumes, and views can be used to delineate between stages of a uni-directional therapeutic journey.

Consider layout and egress strategies that do not have the service user exiting a facility through the reception/entry area.

Consider circulation which keeps service users entering and service users leaving from interacting and maintains privacy.

### Relating to trace

Leather, vinyl or wooden furniture is preferred, or upholstery that is not at all worn and is well maintained.

Ensure furniture does not keep the imprints of previous inhabitants.

Minimise use of carpet on floors; instead, select wooden floorboards or tile. In general, select materials that will not show trace or weathering over time.

Table 1  
Design  
suggestions for  
therapeutic space

This study emphasises a consideration of the role of interiority when designing therapeutic space. Awareness of the various aspects of physical interior space which provoke emotional reactions and create disruptions in perceptions and experiences is key to developing supportive space for therapy and counselling. This approach emphasises the harnessing of affordances and environmental fluxes for sensory engagement which is supportive, rather than focusing on simply buffering and neutralising their effects (Sadar, 2018). This study also suggests that the design of space is overlaid with multiple other realms of constructed narratives and imagery. Therapeutic interiors are obliged to realize this; designers and architects of the interior must carefully consider the projections, receptions and possibilities for reflection that are produced by an environment. This study finds that the perceptions of the spatiality of individuals who self-harm consists of a particular familiar cluster of spatial understandings which influence constructs of boundary conditions, and interactions between actors in therapeutic spaces. The therapeutic space is not a simple container of therapy but an agent in generating meaning, metaphor and spatial experiences which may impact therapeutic services. Through careful consideration of materiality, atmosphere and evidence of relations or traces, inhabitants may be more conscious of themselves and others, and the potentials for their own narratives and self-development.

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