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Microenvironments: towards a socio-spatial understanding of territorial expression for urban design

Abstract

This paper aims to develop a concept of microenvironments building from research focused on the territorial perceptions of people with learning disabilities. The research highlighted the communicative and interactive significance of an innate territorial awareness in people to distinguish between what is understood as *mine, yours, theirs* and *ours* (MYTO). This is found to share aspects of commonality with socio-spatial concepts in urban design discourse, whilst also offering an accessible and inclusive means to communicate territorial experiences in ways that can overcome exclusivity often associated with specialist terminology. MYTO contributes to this wider arena of discourse by providing foundations for developing a concept of microenvironments through integration of social, spatial and material dimensions of human-environment interaction. The microenvironments concept enables the collective sense of MYTO to mediate and attribute territorial significance to particular forms of social and spatial relationship furthering understanding of small-scale human-environment interactions in ways relevant to urban design theory and practice.

Keywords

Microenvironments, social, spatial, material, territoriality, urban design

1.0 Introduction

The aim of this paper is to develop a concept of microenvironments as a theoretical contribution to socio-spatial discourse in urban design. This has foundations in aspects of empirical work undertaken with groups of people with learning disabilities focused on their experience of outdoor places (M, 2008a; M et al, 2011; T, M and S 2013). The work highlighted the importance of inclusive and accessible language as a principal means by which people with learning disabilities could become active participants in communicating experiences and wishes about routinely used places with individuals and agencies empowered to make change. A programme of workshops and events undertaken over two years gradually revealed that an inclusive semantically oriented approach to communicating territorial experience (*mine, yours, theirs, ours*: MYTO) could offer potential for expansion beyond the context of learning disability. Building from this foundation, the current paper integrates these findings with extensive literature review of related socio-spatial principles and concepts. The concept of microenvironments was developed from this as integrated relationships of social, spatial and material dimensions of small scale human-environment interactions. As such, the microenvironment concept offers potential to operationalise semantic aspects of the learning disability research programme findings for wider socio-spatial urban design application.

Achieving this aim involved a two part methodological process. The first part builds a territorially focused communication framework (*mine, yours, theirs, ours*: MYTO) through a three stage qualitative empirical investigation. This applied a range of participatory methodologies to investigate territorial experiences of people with learning disabilities in different urban settings. This is outlined in section 2.0 of the paper. The resulting MYTO framework then provides the basis for a second methodological process focused on critical literature review of resonant territorial themes in the wider urban design literature. This establishes microenvironments as dynamic interactions of social, spatial and material dimensions of small scale human-environment relationships. The central hypothesis is that through this integrated understanding of urban realm, microenvironments provide a

conceptual foundation to facilitate a more balanced experience of territorial expression through the design of small-scale human-environment interaction to the potential benefit of human self-esteem and self-identity (Honneth, 1995; Proshansky et al., 1983; Tuan, 1977, 1980). This is outlined in section 3.0 of the paper.

By emphasising microenvironments as territorial entities we are highlighting a particular form of human-environment relationship that involves a certain geographical area that can be marked or personalised, individually or collectively, and therefore stabilised in some way (Bobic, 2004; Dovey, 2010; Feliciotti et al., 2016; Porqueddu, 2018). More specifically they seek to capture forms of territorialisation that reflect processes of space appropriation ‘...in which the attachment individuals establish with the environment is defined and characterised by the activity they carry out in the space.’ (Bonnes and Secchiaroli, 1995: 91). Through this, microenvironments conceptualise the socio-spatial significance of urban realm in ways relevant to theoretical discourse and practical application. The specific socio-spatial perspective that we wish to capture through the microenvironments concept is that at very small scales of human-environment interaction social, spatial and material dimensions need to be understood as integrated and mutually interdependent. This builds on a perspective which sees the need to establish and express territoriality as an essential characteristic of human-environment relationships (Altman, 1975; Habraken, 1998; Kärrholm, 2012). We see microenvironments as the smallest fundamental scale of socio-spatial urban realm important to human experience and relevant to the delivery of more inclusive built environments. Their importance is amplified by this focus on small scales of urban realm, which often fall below the scale of attention for professional agencies of change.

The microenvironment concept aims to capture points of stability within the dynamic and transformative nature of human-environment relations. By this means it adds a new theoretical perspective to socio-spatial understandings of urban realm by making explicit specific characteristics of social, spatial and material dimensions of human-environment interactions at small scales. Interconnectivity in these characteristics provides a basis for translating the microenvironment concept into practice emphasising social benefits of small scale human-environment interactions focused on the importance of territorial functioning. In this way the microenvironment concept can enhance the social significance associated with participative approaches to urban place-making and the benefits that accrue from the collective impact of networks of small-scale interventions (Arefi and Kickert, 2019; Dovey, 2012; 2016; Muminovic, 2015; Peck, 2012). This is achieved through focus on the commonplace settings of routine life, their importance in shaping life quality, and the role of people in their realisation and use (Alexander, 2001; Gehl, 2010; Habraken, 1998). This will help inform designers about the creation of urban spaces that are better equipped to evolve and adapt over time in line with the needs of those users who come to inhabit them (Dovey, 2010; Feliciotti et al., 2016).

The concept of microenvironments developed in the current paper has its principal foundations in human-centric research focused on people with learning disabilities. However, we believe that with further development microenvironments can contribute to growing discourse on the issue of the agency of non-human actants in environmental understandings (Burke, 2022; McMaster and Wastell, 2005; Lockie, 2004). This is beyond the scope of this paper, but is primarily based on the importance of the microenvironment territorial emphasis as symbiotic relationships of social, spatial and material dimensions of human-environment experience which offers potential to reach beyond ontological

assumptions that human-environment relationships are primarily understood from a human perspective alone.

2.0 Microenvironment Inclusive Territoriality (Mine, Yours, Theirs, Ours)

The MYTO framework is an outcome of research carried out to explore ways in which people with learning disabilities could be empowered to participate more effectively in managing their own routinely encountered surroundings and inform processes of change. Earlier publications have extensively detailed this research programme (M, 2008a; M et al, 2011; T, M and S 2013). However, we summarise core aspects in this section which relate particularly to the development of the MYTO framework to highlight relevant methodological detail. The research programme, undertaken over a two-year period (2008-2010), focused on the relationship between control, territoriality and the legacy of professionalism in how these are understood and experienced. Building from earlier research (M, 2008a; M, 2008), the programme evolved through progressive development of a longitudinal ethnographic study. The MYTO framework gradually came into focus across three key phases of work in different environmental contexts, including urban parks and gardens and public transport systems. Throughout the process the number of learning disability participants and members of associated professional bodies increased from ten at the outset to approximately one hundred and fifty at the conclusion of the programme. A summarised account of this three-stage empirical research follows in sub-sections 2.1, 2.2 and 2.3.

Funded initially by the University of Sheffield Knowledge Transfer Opportunities Fund and subsequently a UK Leverhulme Trust Research Project Grant, groups of people with learning disabilities participated in developing ways to find their own unique voice through which to communicate concerns and aspirations about places they used. Learning disability participants had a range of physical, intellectual and sensory impairments which in some cases impacted upon speech and written language capability. The research was conceived in response to recognition that the lack of engagement in decision making routinely experienced by people with these forms of learning disability is an extreme example of a broader problem in society which emphasises people as receivers of professionally delivered environments more than as participants in creation of places they use.

An extensive programme of participatory workshops broadly based on a qualitative research approach, including observations in urban settings, discussion forums, photo-elicitation, semi-structured interviews, animation and performance arts, was designed. This aimed to emphasise the way participants articulated territorial experience and expression as influences on how people develop environmental competencies and confidence that contribute to development of independence and self-esteem (Dovey, 2010; Franck and Stevens, 2007; Habraken 1998, 2005; Honneth, 1995; Jacobs and Appleyard, 1987). The work highlighted the importance of small-scale environmental details (and their inherent material and social qualities) in the daily experience of people with learning disabilities. It also exposed that the innate and often sub-conscious influences that drive people's territorial behaviour and experience can be far removed from professional processes of environmental change which are often based around specialist terminology and practices inaccessible to those outside the particular professional fraternity. To this end the research developed an understanding of territorial experience with participants from the learning disability community conceptualised as a synthesis of people's individuality, their social interactions and places where these become expressed.

This synthesis progressively developed into the inclusive communicative framework of MYTO by means of three participative research projects beginning with ‘Our Parks and Gardens’ (2.1). This highlighted the significance of individual preferences and shared perspectives in relation to experiences of green open spaces and how these became valued and respected within the participant group. The project findings informed development of a seven point communicative toolkit to facilitate practical application of these territorially oriented perspectives including the inclusive communication of them through the sense of *mine*, *yours*, *theirs* and *ours*. This was then adapted for application on a second larger participative project focused on exploring relationships between individual (*mine*) and sharing (*ours*) experiences of urban settings and spaces associated with Sheffield city’s public transport systems: ‘Excuse Me, I Want to Get On!’ (2.2). Findings from this project served to further develop understandings of how environmental factors, participative activities and social encounters could be captured as an integrated framework of MYTO experiences. This became further developed and consolidated into an inclusive methodological framework called the Experiemic Process in the much larger participative project, ‘What’s the Fuss, We Want the Bus’ (2.3).

2.1 ‘Our Parks and Gardens’

‘Our Parks and Gardens’ was undertaken in partnership with ten men and women with learning disabilities, a member of support staff, and volunteers at a Yorkshire Day Service Centre of Sheffield Mencap (M, 2008a; 2008b). Partnership in how the project was developed and undertaken characterised a community ownership and responsive ethos from the beginning: the first manifestation of which was selection of the project title. The aims of the project were to: discover what people with learning disabilities think about city parks; create ways to share how they may use parks with other community members; develop inclusive communicative opportunities to help park maintenance and management staff include the needs of people with learning disabilities in the future of city parks.

Achieving these project aims involved the lead researcher developing processes for identification of project location, participant community, focus on urban park spaces, semi-structured interview and workshop frameworks. Initial project stages, however, revealed that this position of predetermination could be productively relaxed, replacing researcher lead with a more inclusive process of researcher facilitation. This participative approach evolved into a seven stage communication toolkit as the principal methodological innovation of the ‘Our Parks and Gardens’ project. It laid foundations for development of the subsequent Experiemic Process (section 2.4) and began to reveal the importance of territorial impulses at the heart of processes of participation which would be central to the MYTO framework. The seven stages are summarised here as follows (footnote: details of how the seven stage communicative toolkit was developed and applied can be found in T,M and S (2011) pp.154-167)

Tool 1 Informed Consent. Building project identity and partner trust through a triangulation of methods including focus groups, presentations and workshops which aimed to reflect and express differences in people involved: establishes community project ownership from the outset (*ours*).

Tool 2 Site Visits. Unrestricted exploration of public parks and gardens, observed and recorded through participant led walks and go-alongs: increased sense of ownership over environmental experience and personal attachment (*mine*).

Tool 3 Drawing Workshop. Unrestricted exploration to visually express individual experiences free of reliance on traditional verbal and written communication methods:

captures moments of personal importance (*mine*), those of others (*yours*), distant interactions (*theirs*), and those shared (*ours*).

Tool 4 Individual Canvas Workshop. Refinement through craft development and distillation of experience: expression of community physical work from the collective (*ours*) of individual public space experience (*mine*).

Tool 5 Photo-elicitation Interviews. Extraction to reveal the narratives beneath the site work experiences: reinforces community ownership of project direction (*ours*) from a collective of individual places and subjects of interest (*mine, yours*).

Tool 6 Staff Questionnaire. Context established from support staff external observations into learning disability participants' environmental reactions: begins to extend the sense of community collective beyond the learning disability context into wider professional agencies (*ours*).

Tool 7 Public Exhibition. Closure through facilitation of a sense of climax and ownership: celebration of collective final achievement (*ours*).

The seven stage process of the 'Our Parks and Gardens' communicative toolkit began to illuminate the importance of the inclusive way in which territorial experience could be captured through articulation of what is experienced and understood as *mine, yours, theirs* and *ours* (MYTO). It also highlighted that processes of participation amplified territorial impulses creating a need for openness and transparency through which the motivations of all participants could be equally conveyed. Such transparency and equality of voice in participation was instrumental in establishing a sense of belonging (*ours*) to the process. Without this the more individually focused territories of *mine* and *yours* tended to prevail, along with a connotation of separation and at extremes exclusion implied in the awareness of *theirs*. (T, M and S, 2013).

2.2 'Excuse Me, I Want to Get On!'

Development of the 'Our Parks and Gardens' toolkit helped reveal that participative processes went beyond delivery of information to decision making professional agencies (M et al, 2011). It had also shown that the process itself was capable of developing tangible benefits in those who participated: there were social as well as informational gains (M, 2008a; 2008b). A notable legacy of 'Our Parks and Gardens' in this respect was the formation in Sheffield Mencap of a broader self-advocacy group they named 'Voices and Choices' (T, M and S, 2013). This became a catalyst for development of a follow on project to apply the communicative toolkit to issues the group wished to address concerning daily travel through the city: 'Excuse Me, I Want to Get On!'. Public transport networks are inherently shared experiences. If their management, spatial organisation, equipment and facilities hinders positive shared use (experience of *ours*), the social encounters that occur can be negative.

'Excuse Me, I Want to Get On!' was funded by the University of Sheffield Knowledge Transfer Opportunities Fund providing the resource for investigation of Sheffield city's public tram system involving a partnership of the 'Voices and Choices' group, a learning disability organisation Speaking Up For Action (SUFA), and the Stagecoach Supertram company. This expanded project partnership increased participant numbers from the original ten in 'Our Parks and Gardens' to over thirty, including learning disability participants, their support staff, and local public transport officials. An initial scoping meeting collectively agreed a sequence of participative methods through which both individual (*mine*) and shared (*ours*) outputs would be delivered. These were: to empower people with learning disabilities to use the tram with safety and confidence; to make explicit good practice for support

workers and family members travelling with them; to identify how local transport service providers might make transport links more accessible and inclusive. Methodological development in pursuit of achieving these added a growing sense of community confidence and empowerment evident in their collective development of methodological innovations to capture and communicate experience of tram use.

Development of the MYTO framework moved forward during this project in a number of ways. Collectively the findings were used to communicate to transport providers that individuals often had different reasons for wanting to use the tram system (*mines*), but also shared a common desire for the greater levels of independence that accessible travel could deliver (*ours*). This began to provide empirical foundations suggesting that achieving a positive balance of individual (*mines*) and shared (*ours*) requirements did not necessarily imply extensive and costly infrastructural change. Rather, it pointed towards benefits that could accrue from the accumulation and integration of many small scale adjustments and interventions including for example: colour coding systems used to clearly coordinate timetables, routes and trams; comfort and accessibility at tram stops; tram stop shelter from weather; clarity of maps and timetables (eg, print too small, positioning too high, poor legibility of graphics and photographs).

2.3 ‘What’s the Fuss, We Want the Bus’

‘Excuse Me I Want to Get On!’ demonstrated how communities and professional service providers could develop productive working partnerships using participatory processes built around inclusive communication and associated methodological processes. The evolving MYTO framework provided a fundamental foundation for these by capturing and articulating territorial experience and impulse. Following precedent from previous phases the project partnership, now expanded to include three learning disability support agencies (Sheffield Mencap, SUFA and WORK Ltd), two transport providers (South Yorkshire Passenger Transport Executive and First South Yorkshire) and representatives from Sheffield City Council, first named the project, thereby consolidating the first statement of *ours*.

In addition to strengthening understandings of public transport experiences of people with learning disabilities, an explicit aim of the project was to build on previous communicative processes to consolidate an inclusive methodological framework. The framework, called the Experiemic Process (M et al, 2011; T, M and S, 2013), evolved from the experiences of the previous two projects and involved the learning disability participants and their support teams taking a much stronger leading role in how ‘What’s the Fuss, We Want the Bus’ would be developed. Transparent partnership working from the outset, through use of workshops, focus groups, film animation, drama and public presentations, actively encouraged all participant groups to be open about what they wished to gain from involvement (articulation of their *mines* in the context of the wider project *ours*).

The Experiemic Process consolidated a sequence of seven participative steps that collectively embodied an overall sense of shared purpose (*ours*) as a way to contextualise more specific individual (*mine and yours*) and participant group (*theirs*) interests. In addition to providing a sequential methodological framework of linked project stages, it also provided a mechanism for evaluation of information throughout the process to ensure that individual and group participant *mines* and *yours*, along with collective *theirs* and *ours* would remain explicit throughout. The Experiemic Process stages are summarised as:

1. **Establishing Project Context:** determined by client group, environmental and/or social context.
2. **Identifying Project Partners:** creating a network of equal partnership with community, service providers, policy makers, practitioners.
3. **Revealing the Issues:** facilitation sessions with project partners to reveal ‘grass roots’ issues of significance or concern within the project context.
4. **Bringing Together the Issues:** commonalities and differences identified in stage 3 are grouped to determine project focus.
5. **Project Methods:** project focus explored through an inclusive process of participation using person-centred methods appropriate to the individuals and project brief.
6. **Representation and Evaluation:** tools of representation and evaluation identify and reveal project outputs.
7. **Findings and Recommendations:** project outputs framed to achieve – understanding of issues from all partner perspectives; identification of opportunities for change; ownership of existing and aspirational project processes and outputs; changes identified to generate MYTO balance and fulfil the project brief.

A driving force for development of the Experiemic Process was to achieve positive change in the lives of participants through opportunity to actively participate rather than simply be recipients of change. It places control over what is investigated, how it is done, and how outcomes are represented and communicated with those that have first-hand experience. (footnote: details of how the Experiemic Process was applied in the project can be found in T,M and S (2013), pp.182-191)

2.4 Summary

The main points of focus to emerge from the research programme with learning disability participants most relevant to this paper are:

- That achieving empowerment can depend as much on the process of participation itself as what this delivers to professional contexts;
- Recognising that participating in actions that make a valued contribution to issues of shared interest can raise levels of individual self-esteem (*mine*) and community cohesion (*ours*);
- The MYTO framework developed as an effective inclusive communication system enabling professional and community participation on equal terms;
- That often the emphasis on territorial experience of sharing and belonging (*ours*) was suppressed by dominance of individuality (*mine, yours*) and separation (*theirs*).
- That small scale environmental details were important in delivery of social benefits and therefore bottom-up minor adjustments could be seen to deliver disproportionate benefits compared to the scale of intervention.

MYTO emerged progressively from the three stages of the learning disability research programme driven predominantly by a need to identify an inclusive framework of communication blending together awareness of different forms of territorial experience (M, T, S and M (2011); T,M and S (2013)). From this research, the emergent MYTO framework can be summarised as:

- ***Mine*:** a sense of ownership/control temporarily or longer term;
- ***Yours*:** awareness of appropriation and control by others nearby;
- ***Theirs*:** awareness of others’ collective presence in the proximate general background;
- ***Ours*:** a sense of connection bringing awareness of belonging to shared interests/concerns.

Through providing such a framework, MYTO has also helped highlight the often overlooked influence that very small scale environmental factors can have on the routine daily life of people. Although MYTO is empirically rooted in a programme of research focused on people with learning disabilities where this influence is perhaps amplified, the essence of its territorial orientation and focus on the small scale is found resonant within wider socio-spatial urban design discourse (table 1).

Table 1: Some examples of socio-spatial discourse resonant in MYTO.

In this context, therefore, the MYTO framework can be extended beyond foundations focused on people with learning disabilities by contributing an accessible and inclusive form of territorial communication that can be located within and helps draw together wider arenas of socio-spatial discourse. This is significant because the empirical work done with the learning disability community groups helped to highlight aspects of territorial experience, captured in the MYTO framework, that may hold relevance for other social groups. In section 3 we explore this by using the MYTO framework to inform literature based review of socio-spatial concepts through which to identify and integrate consistent spatial and material dimensions to develop a wider conceptual framework for understanding very small scale, territorially focused human-environment interactions: microenvironments. From roots in research focused on the learning disability community, MYTO is thereby shown to reach beyond this context to help consolidate wide ranging and currently largely disparate theoretical perspectives that capture aspects of human-environment interaction in a more concise and inclusive conceptual framework.

3.0 Microenvironment Conceptual Framework: social, spatial and material dimensions

We have sought to show in section 2 how the MYTO framework developed from the empirical research with learning disability participants, public transport officials and Sheffield City Council representatives as a means to understand territorial experience at very small scales of human-environment interaction. This section builds from these foundations to develop the inter-related social, spatial and material dimensions of the microenvironments concept, establishing what each consists of, and how they coalesce as an integrated conceptual structure. This gives the microenvironment concept practical potential for design practice by ensuring that spatial and material decision making is integrated with their social implications.

Figure 1: Microenvironment Conceptual Framework

This begins with interpretation of the MYTO framework of communication to form the *social dimension* of territorial expression within the microenvironment conceptual framework. A core question following from this relates to understanding how MYTO might manifest spatially and materially. This is particularly important if designers and researchers are to be able to understand how the territorial experiences it communicates holds implications for design decision making that concerns spatial arrangement and the materiality that defines this. We will show how this can be linked to the opposing yet complimentary human desire to protect privacy whilst retaining opportunities for social exposure in the establishment and management of territories. This introduces a *spatial dimension* related to juxtapositions and perceptions of small-scale territorial occupations and awareness of those of others, either as individuals or groups. Spatial organisation is closely related to the materiality of the environment. From a territorial perspective however, which in public realm may be as much perceptual as physical, its *material dimension* may manifest as enduring physical form or

more fleeting, temporary forms of materiality resulting from short term slippages in function and form according to variations in locally active social and behavioural expressions (Dovey and Polakit, 2010). The material dimension in this context, therefore, reflects a relatively unstable aspect of territorial expression subject to continuous adaptation through social acts across different timeframes.

Figure 2: Microenvironments

3.1 Microenvironment Social Dimension

Collectively, MYTO is a socially oriented way to understand and articulate related but distinguishable forms of territorial awareness in the directly experienced human-environment relationship. The awareness of *mine* is the most explicit personal territorial sensation generated when people feel they have a sense of ownership over the space occupied, temporarily or longer term (Oldenberg, 1999). A sensation of *yours* in comparison is generated when someone else in close proximity has appropriated a space or object thereby creating another separate territory, introducing a sense of mutual recognition and understanding (Habraken, 1998; Honneth, 1995). *Theirs* reflects a greater degree of removal, psychologically and/or spatially, from *mine* and *yours*, suggesting awareness that others exist within our proximity but as a general background without specific contact or association. In comparison the sensation of *ours* reflects a subconscious acknowledgement of belonging to something or somewhere that others may also feel similarly.

In terms of the integrative socio-spatial underpinning of the microenvironments concept, the establishment of opportunities for people to experience *ours* is perhaps the most important of the four territorial sensations (M, T, S and M (2011); T,M and S (2013)). In the context of other understandings of the integrated nature of human-environment relations this can be related to the need for people to experience recognition as a means to establish self-esteem, regarded as one of the key elements to human happiness and well-being (Honneth, 1995; Tuan, 1977; Wiking, 2017). Whilst the sense of *mine* is an important territorial experience in development of self-identity, the wider context in which *mines* are established is also important. This was a particularly pronounced finding from the people with learning disability research programme outlined in section 2. ‘What’s the Fuss, We Want the Bus’ especially highlighted the social importance of the collective and inclusive sense of shared purpose (*ours*) to the identification and communication of specific individual and participant group interests (*mines*).

In this respect awareness of *ours* provides a territorial realm that requires exchange and negotiation which acts to diminish risk of the expression of *mines* becoming excessively introspective and possessive. *Ours* is, then, the shared commonality, which may have spatial, social and/or material expression, in which people can establish and express self-identity whilst recognising the existence of boundaries that sustain the collective sense of *ours* important to establishing the ground for recognition necessary to self-esteem (Habraken, 1998; Honneth, 1995). Concern is evident throughout discourse on urban design theory that contemporary approaches to urban design may diminish or obstruct opportunities for urban users to access and experience sufficient awareness of belonging, or *ours* (Cuthbert, 2007; Habraken, 1998; Jacobs, 1961; Punter, 2011).

In terms of establishing the social dimension of microenvironments we suggest, therefore, that the concept of *ours* provides a reconciliatory function with potential to overcome the polarisation implied by the predominant presence of *mine*, *yours*, *theirs* evident in the

outcome of much contemporary urban planning and design practice (Cuthbert, 2007; Hutter, 2016; Punter, 2010). In this sense, we suggest a fundamental goal that can be associated with the translation of microenvironments into practice might lie with its use in delivery of environmental conditions that can optimise establishment of the sense of *ours*. Whilst MYTO gives a microenvironment an explicitly social orientation as an expression of territorial experience, its practical value requires some understanding of how these terms can be interpreted spatially and materially.

3.2 Microenvironment Spatial Dimensions

A spatial perspective can be introduced by considering the extent to which MYTO might be related to the spatial concepts of proximity and distance (Gehl, 2010; Hall, 1966; Lynch & Hack, 1984). In this context both terms hold perceptual as well as spatial connotations where proximity captures the sensation of nearness to something or somewhere. Distance in contrast reflects the sense of being apart. Relating this to the scale of microenvironments as forms of small-scale human-environment encounter, *mine* and *ours*, for example, may imply individual and collective forms of proximate experience: a sense of inclusion or belonging. *Yours* and *theirs* in comparison suggest degrees of separation: a perceptual or spatial distance from situations recognised as belonging to others, either individually or collectively (Gehl, 2010; Hall, 1966). This has some resonance with Cullen's references to the experience of *here* and *there* in his discussion of spatial structure in townscapes, "...we discover that no sooner do we postulate a HERE than automatically we must create a THERE, for you cannot have one without the other." (Cullen, 1996: 10).

Although *mine* and *ours* may suggest proximate experience in the sense that individuals are *within* something with boundaries that define it (physical or psychological), this does not necessarily suggest anything that can be understood as predominantly geometric. The emphasis is experiential rather than dimensional: a product of psychological centrality rather than geometric containment (Alexander, 1979; Altman, 1975; Tuan, 1977). Experience of both is, however, socially significant: *mine* to the establishment of self-identity; *ours* to the embedding of a collective sense of belonging allowing the self-identity of individuals to find recognition within it, a vital human need relating to achievement of self-esteem (Honneth, 1995). As implied by Cullen (1996), however, such socially significant experience cannot exist without the simultaneous awareness of physical or psychological realms elsewhere that individuals and groups need to be aware of but with which they may not have direct association.

Another, more perceptually oriented way to understand the spatial dimensions of microenvironments, as expressions of MYTO variations which move beyond implication of purely geometric definition, can be found in Martin's research into the social characteristics of residential back alleys (Martin, 1997). Martin highlights the way that territorial expressions of residents gradually act in ways that achieve a subtle balance of *hide* and *reveal* throughout the alley, reflecting how these territories transform in response to residents desires for privacy and social interaction. To this extent alleys can be transformed from being merely functional conduits into settings that balance social availability and protection of privacy by means of the way different boundary treatments and other material features are configured and adapted to form personal and communal territories. Martin links the development of community spirit in these residential areas with the way that built form is amenable to the control and adaptation of individuals to establish the extent to which they wish to be private (*hide*) or socially available (*reveal*) as they move about in routine life. The degree of control available to residents and how they use this according to their individual

and collective needs and desires can be equated with establishment of a unique integration of their MYTO relations.

Space in this context is more a question of perception than measurable dimension and therefore closer in association to the way MYTO variations are understood. In practice, therefore, optimal spatial organisation could be said to be that which enables achievement of a balance of territorial experience reflecting an interdependence of self and community expressed as the routine awareness of MYTO. This expanded conception of the inter-related nature of spatiality and sociality holds implications for how we understand the materiality of the human-environment relationship.

3.3 Microenvironment Material Dimension

In the context of microenvironment development MYTO provides a way to understand and structure different forms of socially oriented territorial awareness which can be related to spatial experience in the form of the desire to balance privacy and social availability. Further development of microenvironments can be achieved through consideration of how this socio-spatial conceptualisation of human-environment relations can be understood in regards to the physicality of urban realm.

The way Habraken (1998) has conceived the structure of ordinary built environments offers an important contribution here. Core to this is his understanding of how ordinary urban form develops, which moves away from an emphasis on material and spatial structure towards a focus on relationships of control. Habraken makes explicit that ordinary, routinely encountered built form and the social processes active within them exist in a state of mutual reciprocity wherever human habitation and material form interact. For Habraken, the integration of social and material attributes develop structure through the interplay of three levels of control: *form*, *place* and *understanding*. *Form* is the control level through which structurally stable infrastructure develops. This is a predominantly material phenomenon that would normally be under the dominant control of those with the specialist knowledge and skills to deliver gravity resistant structures. *Place* captures how such infrastructure is then territorialised by processes of occupation and how this is managed through establishment of physical, symbolic and social boundaries. These processes of occupation introduce a social dimension to the overt materiality of *form*.

Identification and control of boundaries and by extension how these become expressed in environment as territorial statements can be associated with processes by which *mine*s become established. Similarly, the awareness of other *mine*s coming into being simultaneously delivers the sensation of *yours*. From this perspective Habraken's conception of *place* as a form of control represents a slippage across a territorial continuum from a dominance of material stability towards greater influence from social processes (Dovey and Polakit, 2010). These processes express appropriation and occupation of material infrastructure signalling distinction in perception of *mine* and *yours* by control of access and egress and through expressions of personal taste and preference. Here, place-making can be considered as a confluence of top-down and bottom-up processes but retains a degree of occupant separation characterised by predominance of *mine* and *yours* territorial experiences.

The significance of this in the conceptualisation of microenvironments lies in the extent to which this dominance of *mine* and *yours* territorial experience is evident throughout much of our prevailing urban built environment (Cuthbert, 2007; Gehl, 2010; Punter, 2011). From the perspective of Habraken's (1998) framework of control levels, this may appear as an

overshadowing of opportunities for territorial control to exhibit *understanding*. This represents the opposite pole of territorial influence from that of *form* in that it is established by means of a general desire (or need) for people to relate to one another through shared structures (social and material) and shared meanings. This is a form of control determined almost entirely by social negotiation and the arrangement and rearrangement of objects and spaces in response. *Understanding* can be closely related to development of the territorial awareness of *ours*. Primarily established by locally active, bottom-up influences, *understanding* is a socially driven form of territorialisation realised in material form by continuous processes of communication and exchange that stabilise shared meanings (Colebrook, 2002; Dovey, 2010). For Habraken, urban structure is the visible manifestation of the mutually transformative interplay of these levels of control. Habraken's framework thus establishes a seamless relationship between material structure and social relationships through the medium of control.

3.4 Summary

The perspectives forming the social, spatial and material foundations of the microenvironment concept come to focus on the importance of connectivity across them in understanding microenvironments as dynamic systems. We have discussed how MYTO as territorial expression gives microenvironments a core social dimension. This social orientation carries spatial and material implications in terms of how MYTO variations become expressed in ways people balance desires for privacy and social interaction and how this manifests materially through the influence of different levels of control. Social, spatial and material dimensions of microenvironments can therefore be understood overall as distinguishable aspects of an integrated and dynamic whole system. This balance of social, spatial and material dimensions can be hypothesised as representing the optimal microenvironment state summarised as follows:

- ***Social:*** A social balance reflects the need for inhabitants to establish necessary territorial sensations of *mine* and *yours* within conditions which also enable a sense of *ours* (belonging) to become embedded. If *ours/belonging* can be achieved this automatically generates the sense of *theirs*: belonging to others, not ourselves.
- ***Spatial:*** This social balance is more likely to be achieved in spatial conditions which do not over-emphasise extremes of the sensations of *proximity* to social contact (reveal) or *distance* from social contact (hide). These attributes are closely related to forms of spatial organisation that allow occupants to choose when and how to retreat away from social exposure (ie, be more private), or conversely be more socially available (ie, be more public). Opportunity for both *hide* and *reveal* are needed locally, rather than only either one or the other.
- ***Material:*** This spatial balance is more likely to occur where the material fabric has: a *form* that is stable, yet not over-dominant (ie, incapable of modification, adaptation, personalisation); offers opportunities for identification, appropriation and occupation according to personal preferences (*place*); enables establishment of shared territories through social negotiation (*understanding*).

Development of the microenvironment concept towards practical application, therefore, requires its articulation in the form of an organisational framework that captures the connectivity within and across these three dimensions. This is important to ensure that, at the point of urban analysis and design, decision-making remains explicitly connected to its social consequences. As a conceptual framework integrating social, spatial and material dimensions of human-environment interaction, microenvironments are operationalised through the simple semantic system of MYTO. This establishes a clear practical imperative in its requirement

for planning and design decision making to work toward optimisation of balance in the experience of *mine, yours, theirs* and *ours*. This process remains focused on the importance of connectivity in planning and design outputs, but permits affordance of higher status and social value to aspects that possess better balance of these social dimensions in its spatial and material manifestations. This challenges prevailing approaches to urban design which tend to privilege individualised territorial expression (*mine, yours*) over more collective expressions (*ours, theirs*).

In practice, microenvironments offer the potential to detect variations in MYTO relations facilitating value judgements to be made about attributes (components and connections) that have desired levels of MYTO balance and those that do not. The integral connection of spatial and material implications within the microenvironments framework can then steer planning and design action towards desired outcomes. How this is achieved may involve a shift in practice emphasis toward spatial organisation and related material fabrication that affords greater opportunities for the territorial experience of *ours* to become a more prominent outcome of urban development practices.

4.0 Discussion

The aim of this paper was to develop a concept of microenvironments as a contribution to socio-spatial discourse in urban design. This has been achieved through a programme of empirical research with learning disability communities to develop the territorially focused communication framework: MYTO (section 2.0). The microenvironment concept builds from this through critical review of a range of theoretical resources spanning interconnected social, spatial and material dimensions of territorial appropriation of urban settings (section 3.0). The MYTO framework is central to the microenvironment concept through providing an inclusive language which offers opportunity to bridge disciplinary boundaries and those of specialist and non-specialist agencies of change. This focuses on the primacy of MYTO variations which capture fluctuations in the territorial experiences of *mine, yours, theirs* and *ours*. The importance of MYTO as a foundation of the microenvironment concept lies with its capacity to overcome the distancing of human experience (and human ways of talking about it) from design decision making in routinely used urban settings. It can, therefore, help counter the perpetuating influence of professional processes that are not guided by shared experiential understandings of space and place (Cuthbert, 2007; Gehl, 2010; Punter, 2011). Microenvironment attributes key to practice in this respect centre on a socially driven imperative to deliver environmental conditions that optimise establishment of a sense of *ours*. This is achieved by means of a participatory and inclusive approach to spatial organisation and material resolution amenable to localised acts of adaptation that reflect and respond to mutually dependent integration of self and community interests and concerns. As a result, this offers significant potential to place microenvironments at the centre of developments towards participative approaches to urban place-making.

This socially oriented focus on small scale territorial expression central to microenvironments means that the concept holds particular relevance for arenas of practice that emphasise and value activation of bottom-up, informal and emergent approaches to environmental change (Porqueddu, 2018; Arefi and Kickert, 2019; Dovey, 2012; Peck, 2012). In particular we suggest that microenvironments may have resonance with approaches to urban place-making that emphasise the importance of localised acts of routine space appropriation (Heathcott, 2019; Franck and Stevens, 2007) and those that involve more participative and dynamic forms of small scale individual and collective self-organisation (Dovey, 2012; Hamdi, 2004; Hou, 2010). This is because microenvironments highlight the possibility that design

interventions that are predominantly led by top-down practices may adversely interfere with the capacity for internal social and psychological processes (bottom-up) to become sufficiently activated and expressed in the realisation of microenvironments as integrated socio-spatial systems. A reorientation of professional arrangements may, therefore, be required that can accommodate a gradual phasing from top-down to bottom-up processes in response to individual and group perceptions of territorial influence. This may suggest a reconsideration of focus away from a predominance of large scale, economically driven urban development practices towards the collective impact of networks of small-scale interventions (Arefi and Kickert, 2019; Feliciotti et al., 2016; Madanipour, Miciukiewicz and Vigar, 2018; Porta and Romice, 2010; Tarbatt, 2012).

An example of a step towards such professional reorientation and the collective, bottom-up led approach it can facilitate could be found in the community land trust campaign applied to reversing decline in the deprived inner city neighbourhood of Granby, Liverpool (Thompson, 2015). The Granby four streets community land trust forms a participative hub for democratic stewardship of place through shared ownerships, community led gardening, street planting initiatives and markets which aim to emphasise the neighbourhood as an inclusive and vibrant community. The Granby community project shares a similar inclusive participatory ethos with that evident in the work with learning disability groups and their project partners outlined in section 2. This helps highlight the microenvironment concept's potential to empower such approaches to urban place making with a framework for communication and action that brings professional agencies and non-traditional stakeholders into closer proximity to inform decision making.

Overall, the concept of microenvironments contributes to the developing arena of interest in socio-spatial understandings of urban realm by emphasising the importance of very small scale human-environment interactions, often overlooked by conventional urban design practice. This is achieved through its innovative unification of social, spatial and material manifestations of territory into an integrated framework that makes explicit the importance of delivering the territorial experience of *ours* as an integral part of urban place-making. In so doing, it offers benefit to practice by responding to calls for urban design theory and its application to become more responsive to social functioning and the wider context of urban social sustainability. (Bobic, 2004; Cuthbert, 2007; Punter, 2010). This corresponds with, and helps to reinforce, well established discourse recognising a richer sense of place in territorial manifestations as integrations of individual and communal meanings, needs and interests.

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