

# Understanding place holistically: Cities, synergistic relationality, and space syntax

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Pages: 19-33



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**The Journal of Space Syntax**

ISSN: 2044-7507 | Year: 2015 | volume: 6 | issue: 1 | Online Publication Date: 26 October 2015

# J O S S

## Understanding place holistically: Cities, synergistic relationality, and space syntax

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This article discusses two contrasting conceptual understandings of place. The approach of *analytic relationality* interprets places as sets of interconnected parts and their relationships. In contrast, *synergistic relationality* interprets places as integrated, generative fields, the parts of which are only parts as they both sustain and are sustained by the constitution and dynamism of the particular place as a whole. This article presents one interpretation of place as synergistic relationality by describing six interrelated, generative processes: *place interaction, place identity, place release, place realization, place creation, and place intensification*. The article considers how concepts and principles relating to space syntax contribute to understanding places as synergistic relationality broadly; and to understanding the six place processes specifically.

*Keywords:*  
Holistic science,  
phenomenology of  
place, place,  
relational ontologies,  
relationality,  
space syntax,  
synergy, synergistic  
relationality, urban  
place making,  
wholes.

### Introduction

In this article, I present two contrasting understandings of place – what I call *analytic relationality* and *synergistic relationality*. In analytic relationality, place is understood as a collection of parts among which are arbitrarily identified a series of linkages then measured and correlated to demonstrate stronger and weaker connections and relationships. In contrast, a synergistic understanding works to interpret place as an integrated, generative field that shapes and is shaped by parts integrally interconnected in a lived, environmental whole. The parts are only parts as they sustain and are sustained by the particular constitution, dynamism, and fabric of the whole. As phenomenological philosopher Jeff Malpas explained, place is ‘constituted through a gathering of elements that are themselves mutually defined only through the way in which they are gathered together within the place they also constitute’ (Malpas, 2006, p.29).

In relation to urban studies and urban design, I argue that a synergistic perspective might contribute to a more accurate and comprehensive understanding of the city and urban place making.

Through identifying and describing one intertwined set of *place processes*, I aim to delineate one possible way of conceptualising urban places synergistically. I then consider how space syntax offers important theoretical, empirical, and practical support for that conceptualisation. In speaking about ‘place’ as a concept, I follow Malpas’ definition: that place is ‘an open and interconnected region within which other persons, things, spaces, and abstract locations, and even one’s self, can appear, be recognized, identified and interacted with’ (Malpas, 1999, p.36). By this definition, places range in environmental scale from a favourite chair or outdoor bench to a well-used room or building to an urban neighbourhood, city as a whole, or meaningful geographic region. Whatever the particular kind of place being considered, the central conceptual and pragmatic concern is the ways in which that place can be understood as ‘a structure *within which* experience (and action, thought and judgment) is possible’ (*ibid.*, p.71). In this article, the range of place scale I emphasise mostly includes sidewalks, streets, neighbourhoods, and towns and cities as a whole.<sup>1</sup>

### Notes:

<sup>1</sup>The research on place is voluminous; reviews include: Cresswell, 2004; Gieryn, 2000; Lewicka, 2011; Manzo and Divine-Wright, 2014; Seamon, 2013. For phenomenological discussions of place, see Casey, 2001, 2009; Malpas, 1999, 2006, 2009, 2012; Relph, 1976, 2009; Seamon, 2012b, 2013, 2014.



### Place as analytic relationality

In an analytic mode of understanding, relationality is interpreted as a set of correspondences and linkages among parts, the specific properties of which are connected to the specific properties of other parts.<sup>2</sup> The reality of any relationship is understood in terms of specific interconnections among parts or particular sets of parts (Wiggins et al., 2012, p.209). Any whole is envisioned conceptually as a complex of interrelated elements often pictured graphically by some set of boxes or sectors connected by a matrix of flow lines and feedback loops. Ontologically, the relationship among the parts is not a whole unto itself but, rather, only a whole as it is a collection of the interlinked parts and their processual interconnections and dynamics.

One prominent example of analytic relationality is the 'General Systems Theory' of biologist Ludwig von Bertalanffy, who envisioned a mathematical science of organised wholes, whether the whole be physical, organic, environmental, psychological, social, economic, or historical (Bertalanffy, 1975; Hammond, 2003). In Bertalanffy's theory, any whole is usually called a 'system', a term that most broadly refers to an integrated configuration of parts interconnected via some matrix of related connections and interactions. Though systems theory is holistic in the sense that any system is interpreted as a cohesive set of elements and linkages, this understanding of wholeness is reductive in that the researcher breaks down reality into parts and then identifies linkages among them. In other words, the whole is defined piecemeal in that it is understood only by first separating out parts that are then interrelated and linked via intellectual reconstruction. No conceptual or practical way is provided to understand and describe *the whole as whole*. Though systems theory recognises that the interaction of parts is not static and constant but shifting and dynamic, this approach to wholeness remains fragmental, since the whole is pictured as

an external, materially definable organisation of parts and relatable connections. To speak of the whole in terms of ambience, character, presence, or serendipitous unfolding is inappropriate ontologically and epistemologically because the whole has been reified and 'separated from the parts that it then dominates' (Bortoft, 2012, p.15).

In urban studies, one finds a wide range of conceptual models working to portray the city as a system defined via analytic relationality (e.g. Al-Sayed, 2014; Batty, 2005). Wiggins and colleagues (2012, p.210-211) pointed out that the analytic understanding of relationality is regularly drawn upon in social-scientific research because the whole can readily be defined in terms of predefined parts and connections transformable into empirical variables that are then quantitatively correlated. In this way, the analytic approach to wholeness is helpful both conceptually and practically because it offers simplified, partial explanations for understanding phenomena originally more complex.

To illustrate more precisely what an analytic approach to place entails conceptually, I draw on current research relating to place attachment which can be defined as the emotional ties between individuals and groups and a particular place or environment (Manzo and Devine-Wright, 2014; Seamon, 2014). In a recent review, social psychologist Maria Lewicka (2011, p.222) concludes that this research most frequently emphasises 'the role of individual differences in place attachment', including socio-demographic predictors (e.g. age, social status, home ownership, and length of residence); social predictors (e.g. community ties and sense of security in place); and physical predictors (e.g. building density, presence of green areas, municipal services, access to nature). Lewicka points out that the great majority of place-attachment research has 'largely ignored processes [and] the mechanisms through which place attachment develops' (*ibid.*). In other words, place and place attachment are

### Notes:

<sup>2</sup> In presenting the two modes of analytic and synergistic relationality, I follow the argument of Wiggins, Ostenson, and Wendt (2012); and Slife (2004). Drawing on Slife, Wiggins et al. used the terms 'weak relationality' and 'strong relationality', for which I have substituted 'analytic relationality' and 'synergistic relationality', since 'weak' and 'strong' suggest a difference in quality and effect. In fact, both conceptions of relationality have their strengths and weaknesses, and, thus, it seems inappropriate to cast 'analytic reality' as less potent, although in many ways it is, as I attempt to demonstrate as the article proceeds. A useful introduction to the broader philosophical literature on 'relational ontologies' (and how the perspective contrasts with the currently more dominant 'substantivist ontologies') is provided by Wildman (2010), who writes: 'The basic contention of a relational ontology is simply that the relations between entities are ontologically more fundamental than the entities themselves' (p. 55). Psychiatrist Ian McGilchrist (2009) argues that the contrasting psychological and neurological groundings for analytic and synergistic relationalities can be understood via the human right-brain/left-brain division, which appears to facilitate two dramatically contrasting ways of understanding and being in the world. McGilchrist associates the left brain with the analytic functions of logic, verbal language, and 'abstracted, decontextualized, disembodied thinking' (p. 137); he associates the right brain with the synergistic function of intuitive, affective, holistic understandings, including those fostered by the arts and phenomenological awareness (p. 142; p. 152-153).

interpreted not as phenomena in their own right but, rather, as some predefined matrix of dependent and independent variables that indicate, via measurement, some degree of correlation and association (e.g. some pre-selected set of empirical measurements demonstrating that degree of place attachment is related statistically to length of residence in a place).

One conceptual example is Scannell and Gifford's 'tripartite model' of place attachment, which incorporates the three interrelated components of *physical elements; personal and group meanings; and emotional, cognitive, and behavioural aspects* (Scannell and Gifford, 2010). In operationalising this model empirically, Scannell and Gifford suggest the development of a 'place-attachment measurement instrument' that could quantitatively demonstrate 'the multidimensionality of place attachment by showing that its effects differ depending on the type or level of attachment' (*ibid.*, p.6). Scannell and Gifford's model illustrates an analytic approach in that it ignores the lived nature of place and place experience as they sustain and are sustained by felt attachment to the place. Instead, place attachment is understood as a phenomenon separable from place and place experience and then reduced to a passive resultant 'produced by' active, causal factors defined via piecemeal human and environmental elements identified *a priori*. The wholeness of place, place experience, and place attachment is largely lost sight of, and place attachment itself is converted into a predefined interplay of independent and dependent variables. In their review of place research, Patterson and Williams (2005, p.368-369) associated Scannell and Gifford's model with a 'psychometric paradigm' that requires precisely defined concepts measured empirically. Patterson and Williams emphasised that a 'structural, holistic understanding' of place, including place attachment, 'cannot be accomplished through the types of concise operational definitions employed

in psychometric epistemology' (*ibid.*, p.369-370). As a more appropriate conceptual approach, they advocated a 'structural, holistic understanding' of place – in other words, a way of understanding grounded in synergistic relationality (*ibid.*, p.370).

### Place as synergistic relationality

In contrast to the analytic perspective, a synergistic perspective on relationality defines the identity and actions of any part by its contextual situation in the larger whole. The function and impact of any part are 'mutually constituted with the broader context within which it is in relationship' (Wiggins et al., 2012, p.159). In that each part enters into the constitution of every other part, the whole involves a presence and manner of characterisation different from its parts and their relationships. One cannot say that the parts are separate from or external to each other as is the case, for example, in Scannell and Gifford's tripartite model of place attachment. Rather, the whole depends on the parts but, equally, the parts depend on the whole. As Malpas (2012, p.239) explains, '[t]he relation is itself dependent on what it relates, but what is related is also dependent on the relation'.

A central difference between analytic and synergistic relationality is ontological in the sense that, for the former, the connections and relationships among the elements of the whole 'are fundamentally self-contained parts that merely interact with one another' (Wiggins et al., 2012, p.209), whereas for the latter, 'relationships are at the ontological foundation of identity and existence' (*ibid.*). In a similar way, Slife (2004, p.159) contends that the primary ontological difference is that, in the analytic mode, relationality is only *secondarily* relational because it ignores 'the shared being of all things' (*ibid.*). Philosopher Henri Bortoft (1996, p.59-60) clarifies Slife's reference to 'shared being' by drawing on the concepts of 'belonging *together*' versus '*belonging together*', first laid out by phenomenological

philosopher Martin Heidegger (1969, p.29). In the former situation, the 'belonging' is established by the 'together', whereas in the latter, the 'together' is established by the 'belonging'. In 'belonging together', a part is a unit in some larger structure because it has a position in the order of a 'together' that is fortuitous, arbitrary, or practically necessary (e.g. addresses in a telephone directory, books in a library, or parts of a clock). Bortoft associates this mode of togetherness with analytic relationality, whereby the researcher predetermines the parts of the whole and then defines and measures their qualities and connections accordingly. In contrast, Bortoft speaks of a situation of '*belonging together*', in which the 'together' is established by the 'belonging' (*ibid.*, p.60). In this sense, the parts are together *first of all because they belong* and, thus, each part is essential and integral, contributing to and sustained by the belonging. This understanding of the whole and its parts is the ontological core of synergistic relationality in that the parts, because they belong, allow the whole to be whole. In contrast, this quality of belonging is typically ignored or denied in analytic relationality, with the result that the researcher can assign sets of parts to the whole that may be misrepresentative or incomplete. The portrayal of the whole may be out of sync with what, via belonging, the whole in fact is.<sup>3</sup>

In interpreting place as synergistic relationality, one can say that each person and group are first of all a nexus of human and environmental relationships, including the lived experiences, situations, and meanings that the person or group encounters in relation to the place in which they find themselves: 'It is through our engagement with place that our own human being is made real, but it is also through our engagement that place takes on a sense and a significance of its own' (Malpas, 2009, p.33). In their review of place research discussed earlier, Patterson and Williams (2005, p.369) argue that a synergistic perspective must 'reject the very notion

that place is a concept suited to a precise definition or that conceptual clarity can be achieved via quantitative operationalization or narrowly defined constructs'. Making an argument similar to Slife's, these place researchers emphasise that the major ontological and epistemological weakness of analytic research on place is the tendency 'to adopt a "molecular" approach that views phenomena as capable of being reduced to a set of interacting elements or variables, rather than a molar approach that conceives of phenomena more holistically as transactional dimensions whose whole is more than the sum of its parts' (*ibid.*, p.370).

#### Space syntax and synergistic relationality

In linking space syntax with the holistic conception of place that I argue for here, I must first justify how it exemplifies synergistic relationality, since space syntax largely defines any place via reductive quantitative descriptions dealing mostly with measurable dimensions of the pathway configuration of that place, whether those pathways are roads, streets, sidewalks, rooms, or corridors. As it defines place largely in terms of empirical, measurable parts and structures, one can readily claim that space syntax is a premier example of an analytic approach to place.<sup>4</sup>

From a synergistic perspective, however, space syntax is striking in that it offers a descriptive vehicle for envisioning how the particular pathway network of a place works to facilitate or inhibit particular movement patterns *throughout that place*. In spite of its objectivist framework, space syntax *gathers and holds together the parts of place that sustain traversals within that place*. This synergistic togetherness is possible because understanding is grounded in the underlying topological constitution of the pathway structure as a whole – the way that a particular pathway is more or less enmeshed topologically in the place's overall pathway configuration and thus, potentially, supports much or little human movement

#### Notes:

<sup>3</sup> Grasping the difference between 'belonging together' and 'belonging together' is difficult; Bortoft (1996, 2012) provides the most insightful clarification. One introductory way to envision the difference is to consider a song: in terms of 'belonging together', the song is a particular set of notes that can be represented via musical notation; in terms of 'belonging together', however, the song is a unique, integrated sound experience that conveys a particular character, mood, and meaning grounded in the 'belongingness' evoked by the song in its wholeness. The song's notes, rhythm, harmony, and so forth make up its constitution technically and audially, but the song as an experience and 'thing itself' is entirely different from its musical components. The song 'is the organization – it is not another note' (Bortoft, 1996, p.353, n.13). It is this manner of organisation that synergistic relationality aims to understand and identify.

<sup>4</sup> Introductions to space syntax include: Griffiths, 2014; Hanson, 2000; Hillier, 1996, 2008; Hillier and Hanson, 1984.

along that particular pathway. Lines of traversal, in other words, are not interpreted as separate, disassociated pathway pieces but as integrated, continuous threads of the larger pathway fabric. As space syntax co-founder Bill Hillier (2008, p.30) explains, '[t]he configuration of the space network is, in and of itself, a primary shaper of the pattern of movement'.

The key phrase here is 'in and of itself', which intimates the inherent wholeness of the pathway structure. In this sense, space syntax offers a synergistic portrait of the potential pathway-movement dynamic of a particular place, and this portrait arises, not additively (from the summation of empirical movement data for each pathway) but synergistically from *the very structure of the pathway configuration itself* as pictured quantitatively. Via measurement, space syntax provides a descriptive means to identify and evaluate a web of continuous, intertwined pathways 'that are themselves mutually defined only through the way in which they are gathered together within the place they also constitute' (Malpas, 2009, p.29).

One of the most important space syntax concepts for understanding the synergistic structure of a particular place's pathway structure is *axial space*, which relates to the *one*-dimensional qualities of pathways. Axial spaces are illustrated most perfectly by long narrow streets and can be represented geometrically by the longest straight line that can be drawn through a street or other movement space before that line strikes a wall, building, or some other material object. Axial lines are significant synergistically for at least two reasons. First, because they indicate the farthest point of sight from where one happens to be, axial lines speak to the visual relationship between 'here' and 'there' and, thus, at the building or settlement scale, have bearing on environmental orientation and wayfinding in a place. Second, because they collectively delineate the spatial system through which the various parts of a place are connected by pedestrian and vehicular

traversals, a building, neighbourhood, or settlement's web of axial space provides a simplified rendition of the potential movement field of the particular place. Obviously, a place is considerably more than its pathway structure but, even so, an axial portrait of place is remarkable synergistically because it reveals the degree of potential movement sustainable topologically *by the place itself* and thus says much about how and where users will more or less likely traverse the place as that place incorporates a continuous, integrated pathway mesh.

An important quantitative measure in regard to axial spaces and potential fields of user movement is *integration*, which can be defined as a measure of the relative degree of connectedness and potential traversal that a particular axial space has in relation to all other axial spaces in a particular pathway system. The assumption is that a pathway connected to many other pathways is more travelled because users need to traverse that pathway to get to other pathways and destinations within the particular place. Such a potentially well-used pathway is said to be strongly *integrated* in the place's movement field because many other pathways run into that pathway and, potentially, provide a large pool of users who must traverse that pathway to get elsewhere. In contrast, a *segregated* pathway has few or no other pathways running into it – for example, a dead-end street. All other things being equal, a segregated pathway will be the locus of less movement, since it typically serves a more limited number of users in its immediate vicinity only.

Through integration and other quantitative measures, space syntax researchers have developed a compelling understanding of the *global* pattern of a place – in other words, the way the particular spatial configuration of a place's pathway fabric *as a whole* lays out a potential movement field that draws people together or keeps them apart. *Natural movement* is the term used to describe the potential power of the pathway network to automatically stymie or facilitate

movement and the face-to-face co-presence and potential interactions among pedestrians and other place users (Griffiths, 2014, p.160-162; Hillier, 1996, p.161-168). In an urban context, natural movement refers to 'going-to' and 'going-through' movements of inhabitants and other users traversing the city. An important part of a city's natural movement includes the typical daily exchanges among merchants, workers, and residents from shops, workplaces, and dwellings along city streets and sidewalks. With many people present and involved in their own regular routines and activities, the result (at least in many traditional urban settings) is animated pathways and exuberant local places (Jacobs, 1961; Seamon, 1979/2015, 2004, 2013).

### Describing place synergistically

In linking space syntax theory with synergistic understanding, I emphasise that this link only relates to pathway configuration as it identifies a coherent, web-like structure in which all the parts (streets, sidewalks, and other pathways) 'belong' via place topology and thus necessarily establish, for that place, a particular pattern of natural movement. Space syntax researchers have recognised that other place elements like density, building types, and number, size, and range of functions and land uses also contribute to place activity and vitality (e.g., Hanson, 2000; Karimi et al., 2007; Karimi and Vaughan, 2014; Vaughan, 2006). For the most part, however, space syntax researchers have held firm to the claim that pathway configuration is primary and thus have given less attention to these other elements of place (Griffiths, 2014, p.160-162; Hillier, 1996, p.161).

In the last part of this article, I offer a considerably different conception for thinking about place synergistically and suggest that this way of thinking might point toward fruitful possibilities for future space syntax research. The question I ask is how place might be described synergistically and what space syntax might contribute to that description.

If, as I have suggested, place involves a lived relationality that is integrated, enmeshed, and whole, how can any underlying structures, dynamics, or interconnections be understood conceptually or offer practical design value? An ontological assumption of any synergistic interpretation of place is that places, place experiences, and place meanings are rarely static and must be considered processually as a shifting constellation of situations, events, and environmental surrounds. In terms of synergistic relationality, place is a dynamic phenomenon that, over time, evolves, devolves, or remains more or less the same (Seamon, 2014). A conceptual and practical need is to bring attention to *generative aspects of place* – identifying underlying, interconnected lifeworld processes that propel ways in which places are what they are and what they become (Lewicka, 2011, p.224-225).

Here, I review a recent effort to consider place in terms of six interconnected processes that each contribute to supporting or undermining the lived structure and dynamics of a particular place (Seamon, 2013, 2012b). These six place processes are: (1) *interaction*; (2) *identity*; (3) *release*; (4) *realization*; (5) *creation*; and (6) *intensification*. I summarise these six processes, highlighting both their place-sustaining and place-eroding modes. I then consider how space syntax might contribute to a more thorough understanding of these six lived processes.<sup>5</sup>

I contend that these six processes describe place as a synergistic relationality because they have a lived relationship to each other in such a way that, on the one hand, when working together in a place-sustaining dynamic, they strengthen place and enliven place experiences and place meanings. On the other hand, when working out of sync or inappropriately, these six processes weaken place and undermine place experiences and place meanings. Most broadly, I argue that through their lived give-and-take and dynamic interconnectedness,

### Notes:

<sup>5</sup> These descriptions are abstracted from Seamon, 2014 (p.16-19). The derivation and justification of these six processes are presented in Seamon, 2012b.



these six processes provide one comprehensive rendition of place as synergistic relationality. I return to this point shortly but first describe the six place processes in both their supportive and undermining modes.

### **1. Place interaction**

*Place interaction* refers to the typical goings-on in a place. It can be related to 'the daily round' of a place and incorporates the constellation of more or less regular actions, behaviours, situations, and events that unfold in the typical days, weeks, and seasons of a place. Place interactions include exchanges between users in the place (e.g. waving to an acquaintance or greeting a friend) and exchanges between users and the particular spatiality and physicality of the place (e.g. deciding to sit on a shaded bench because the heat of the day has made one tired). Place interactions range from small, momentary actions (e.g. moving to the edge of the sidewalk because a pedestrian ahead has just spilled his soda) to regular weekday routines that are largely habitual (e.g. having coffee at 9am each morning in the corner café) to intentional, directed place actions and efforts (e.g. the café's proprietor refurbishing her storefront or the local planning committee adding more sidewalk seating). Whatever its scale or nature, interaction is important to place because it is the major engine through which users carry out their everyday lives and places gain activity and a sense of environmental presence (Jacobs, 1961; Mehta, 2013; Whyte, 1980).

Place interaction as process disrupts place when certain actions, situations, and events undermine the experience of that place and generate distress, fragmentation, and decline. Typical interactions become fewer or destructive in some way – for example, a busy stretch of sidewalk and street becomes empty of users; or regular interpersonal exchanges in place become fewer and less friendly (Fullilove, 2004; Rae, 2003; Simms, 2008; Klinenberg, 2002).

### **2. Place identity**

*Place identity* relates to the process whereby people associated with a place take up that place as a significant part of their world. One unselfconsciously and self-consciously accepts and recognises the place as integral to his or her personal and communal identity and self-worth. People *become* and *are* their place as that place *becomes* and *is* them. Phenomenological philosopher Edward Casey (2001, p.684) describes the relationship of self and place in terms of 'constitutive coingredience' – in other words, 'each is essential to the being of the other', and, thus, there can be 'no place without self and no self without place'. Place identity can range in lived intensity from the newcomer's limited cognitive awareness of place, to the long-time resident's deep but taken-for-granted involvement with and attachment to place (Relph, 1976; Seamon, 2008). Place identity and place interaction are reciprocal in the sense that, through place interaction, participants actively engage with place and come to feel a part of the place.

Place identity as process undermines place when individuals and groups become alienated from their place. People associated with the place become less willing to take up that place as a part of their taken-for-granted world. They mistrust or feel threatened by other people or events of the place and may consider moving elsewhere to a safer or more accepting situation. If offensive action is not possible, the person or group may withdraw defensively into minimal interaction with and exposure to the place; or they may work to undermine or harm the place in some way (Fullilove, 2004; Klinenberg, 2002; Simms, 2008). What once might have been a *field of care* – a place known through prolonged involvement and attachment (Tuan, 1974, p.236-245) – becomes an unreliable world of discomfort, distress, or fear.



### 3. Place release

*Place release* involves an environmental serendipity of unexpected encounters and events. Examples of place release are meeting an old friend accidentally on the sidewalk or enjoying the extemporaneous performance of an itinerant street musician. Through happenstance and surprises relating to place, people are 'released' more deeply into themselves. Partly because of place, 'life is good' (Jacobs, 1961). Place release is an important dimension of place in that, even in the most routinised environments, serendipity and surprise can happen and offer momentary zest and enlivenment to everyday situations otherwise inertial and humdrum.

Place release as process undermines place when the pleasure of the place becomes unsettled and unsettling in some way. The place less often or no longer offers enjoyable surprises and unexpectedness; it may provoke awkward or unpleasant surprises – for example, if one is robbed on the block where he or she lives. Users feel less the zest for daily life to which the place formerly contributed. They may reduce their involvement in place interactions and feel less kindly toward the place.

### 4. Place realization

*Place realization* refers to the palpable presence of place (Relph, 2009). The environmental ensemble of the place (its particular physical constitution), coupled with that place's human activities and meanings, evokes a distinctive place ambience and character that seem as real as the human beings who know, encounter, and appreciate that place – for example, the 'Paris-ness' of Paris or the 'West-End-ness' of London's West End (Seamon, 2012b, p.10-11). The power of realization as a place process is pointed to in situations where settlements with a strong sense of place, having faced some major destructive event, are able to re-establish themselves – for example, Chicago's remarkable rebuilding after the 1871 fire; or lower Manhattan's

steady redevelopment after the Twin Towers were destroyed by terrorists in 2001.

Place realization as process undermines place when the ambience of place deteriorates in some way or is crippled entirely through inappropriate policy, insensitive design, lack of care, or a destructive event like war or natural disaster. The place may devolve into disorder, shabbiness, unpleasantness, hostility, or some other entropic quality that unsettles inhabitants and disrupts place interaction and identity.

### 5. Place creation

In *place creation*, concerned people responsible for a specific place draw on their commitment to and empathetic knowledge of the place to envision and make creative shifts in policy, planning, and design so that place interaction, identity, release, and realization are enhanced in positive ways (Alexander, 2012). Examples of place creation range from an elderly woman planting petunias in her apartment flower boxes each spring, to a signature building like architect Frank Gehry's Bilbao Museum which helps to revitalise an entire city. Through thoughtful programming and creative design, laypersons, professionals and civic officials make a place better.

Place creation as process undermines place when it leads to thinking, envisioning, and making that misunderstand or ignore the real needs of place. The result is arbitrary or thoughtless policies, designs, and actions that weaken place by misinterpreting what it is and thereby negating its core features and situations. The history of architecture, planning, and policy are rife with examples of place insensitivity that undermined or destroyed real-world places (e.g. Hall, 2014; Hanson, 2000).

### 6. Place intensification

*Place intensification* identifies the independent power of the material and spatial environment, including well-crafted design, construction, and

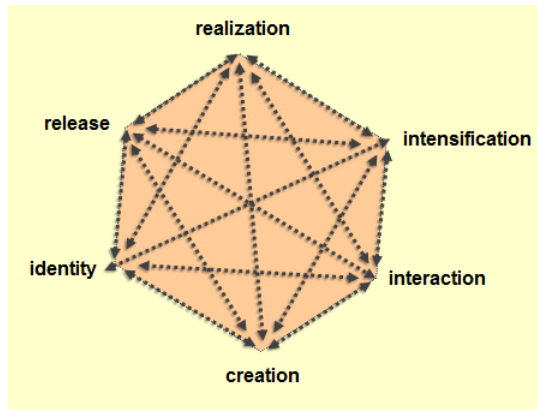
fabrication, to shape and strengthen place. Place intensification sheds light on how the physical and designed features of place, though they may be only passive material 'stuff', can be an active contributor to enhancing place quality and character (Gieryn, 2002). In its constructive modes, intensification contributes to places that become better or more durable in some way – for example, the power of well-designed seating to draw users into a plaza (Whyte, 1980).

Place intensification as process undermines place through poorly conceived design, policies, and constructions that enfeeble or squelch the life

of the place – for example, urban mega-structures that provide little physical or visual connectedness to sidewalk and street (Hillier, 1996; Whyte, 1980). Inappropriate or destructive place intensification can unfold at a range of environmental scales from a bench not wide enough to allow users to sit on both sides, to a new-neighbourhood pathway configuration designed for efficient auto traffic rather than safe, accessible pedestrian traversal. Place intensification and place creation are reciprocal in that thoughtful design leads to appropriate, place-strengthening environments, whereas thoughtless design leads to inappropriate, place-undermining environments (Alexander, 2012; Bentley et al., 1985; Jacobs, 1961; Mehta, 2013; Relph, 1976; Seamon, 2012a; Whyte, 1980).

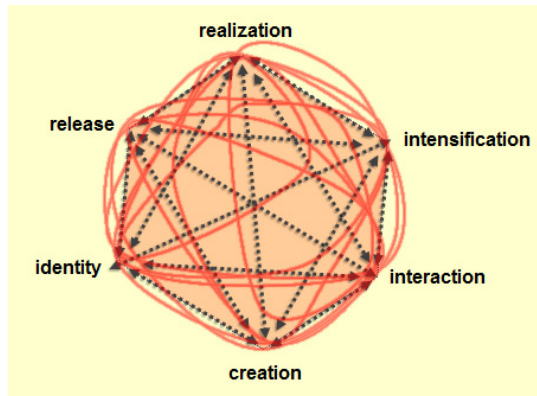
**Figure 1:**

*Simplified rendition of give-and-take linkages and dynamics among the six place processes.*



**Figure 2:**

*A more life-like rendition of give-and-take linkages and dynamics among the six place processes, which proceed in an unpredictable, interlocking unfolding that can maintain, strengthen, or undermine the particular place.*



**The six place processes as wholeness**

In relating the six place processes to place making, one can observe that in well-used and well-liked places, all six processes are typically present and involved in an intricate, robust give-and-take that is largely unpredictable (Figures 1 and 2). All of the six processes play a significant role in vibrant places and creative place making, though for particular places and historical moments, the particular dynamic of the six processes may involve different generative combinations and different gradations of intensity, quality, and duration. Whether in relation to exuberant or faltering places, the six processes mutually invigorate or undermine each other at a wide range of generative levels and scales; each process potentially activates and is activated by the others (Jacobs, 1961, chapter 22; Seamon, 2012a).

It is important to emphasise that, in Figures 1 and 2, the graphic rendition of the six processes is static; their continuous, shifting commingling would be better represented by cinematic animation whereby supportive modes of the six processes coalesce progressively in a virtuous circle of place making and robust 'life of the place', whereas

undermining modes coalesce progressively in a vicious circle of deteriorating, dysfunctional places and placelessness. Do, however, these six interconnected processes really exemplify place as synergistic relationality? I contend that they do, in that all six processes are interrelated and contribute to or detract from the lived constitution and dynamic of any real-world place. In relation to successful, robust places, for example, place interaction and place identity are central in that place users become involved with the familiarity and regularity of place actions and place encounters that contribute to who one is and what his or her life routinely is in relation to place. Place release and place realization contribute to robust place in that place uniqueness is fuelled by place serendipity that in turn fuels environmental character that further enhances a zest for place. Similarly, place creation, when motivated by genuine concern for place, facilitates appropriate place intensification via which spatial, material, and fabricated elements and qualities support everyday user needs and enhance the ambience and character of the place. Most broadly, the place dynamic proposed here points to a synergistic relationality marking out a continuous, ever-shifting interplay and exchange among the six place processes, whether in constructive or destructive modes. Place, place experiences, place meanings, and the six place processes all interrelate and mutually fold over, intensifying or unravelling place possibilities.

### **Space syntax and the six place processes: Intensification, interaction, and creation**

I next explore some potential connections between the six place processes and space syntax. As already suggested, the most important synergistic understanding offered by space syntax is that differently configured pathway webs generate different patterns of pathway movement and face-to-face encounters among place users. In relating this understanding to the six place processes, one notes that, on the one

hand, space syntax provides significant insights relating to three of those processes – place intensification, interaction, and creation. On the other hand, one can argue that the approach offers less understanding in relation to place identity, release, and realization.

Space syntax discoveries relate most directly to place *intensification*, since the perspective contends that the particular pathway layout of a place grounds the particular spatial and environmental dynamic of that place. In relation to place intensification, space syntax offers a superlative example of how environmental spatiality and materiality – though in one sense inert and passive – can actively contribute to making everyday human worlds one way rather than another. Sociologist Thomas Giryn (2002, p.341) used the phrase ‘agentic capacity of material realities’ to describe the independent power of materiality and spatiality to contribute to the specific constitution of human lifeworlds. Space syntax is an exceptional example of this agentic capacity because the approach demonstrates that the physicality of place, largely via pathway structure, prearranges a spatial field, the particular nature of which has central bearing on the relative amount of human movement and co-presence in that place. As Hillier (1996, p.188) explained:

‘Architecture, through the design of space, creates a virtual community with a certain structure and a certain density.... If space is designed wrongly, then natural patterns of social co-presence in space are not achieved. In such circumstances, space is at best empty, at worst abused and a source of fear.’

In turn, space syntax illustrates how the degree and kind of intensification as related to pathway configuration sustains or undermines place *interaction* – the potential for the individuals of a place to be present together spatially and visually and thus, at least potentially, partake in interpersonal encounters and communal exchanges. One of the most valuable space syntax discoveries relating to place interaction

is the *deformed wheel* – an integrated topological structure roughly in the pattern of a ‘wheel’ in which the ‘rim’, ‘spokes’, and ‘hub’ typically delineate the most integrated pathways that are well used by residents of the place and also mark main entry routes likely to be used by ‘strangers’ coming to that place. Along these most integrated pathways are typically found the major public spaces of the place as well as location-dependent uses such as shops, eateries, and civic buildings. In the interstices between these most integrated pathways are located the more segregated, less used pathways that, for cities and towns, usually mark out residential neighbourhoods. In relation to environmental design as place making, the deformed wheel is hugely significant, since it demonstrates how degree of pathway activity and functional uses can be arranged in such a way whereby the places of street life, publicness, and strangers’ mixing with residents are in physical and lived proximity to quieter, residential neighbourhoods. Movement and rest, activity and quiet, difference and locality, public life and home are mutually convenient both physically and experientially.

In this sense, space syntax offers a major contribution to place *creation* in that the deformed wheel appears to be an archetypal spatial structure for envisioning and making place as a synergistic relationality. In extending the deformed-wheel structure to the city as a whole, space syntax researchers have demonstrated that, in traditional urban geographies, the city pathway structure typically comprises a nested, integrated fabric of smaller and larger deformed wheels (usually associated with designated neighbourhoods and districts – for example, London’s West End or City). The most integrated pathways of these districts mesh together to generate a much larger *deformed grid* that generates the dynamism of natural movement throughout the city as a whole. In twentieth-century architecture and planning, this nested structure of deformed wheels was often replaced with the hierarchical, treelike

systems of segregated pathways favoured by urban planners, traffic engineers, and modernist architects. These segregated pathway structures undermined the integrated natural movement of traditional places and contributed to the demise of walkable neighbourhoods and the dissolution of urban and suburban communities (Hanson, 2000; Hillier, 1996; Karimi and Vaughan, 2014).

#### **Space syntax and the six place processes: Release, identity, and realization**

In its current stage of development, space syntax contributes less to understanding the place processes of release, identity, and realization. Place *release* involves the importance of everyday serendipitous encounter in place, a phenomenon that space syntax intimates via its demonstration of an intimate relationship between pathway configuration and user co-presence and co-encounter. Space syntax suggests that specific pathway topologies intensify or weaken informal and formal interpersonal contacts, but there has been little empirical research exploring how or why these contacts happen or how they might be described and typed ethnographically and phenomenologically. Though not informed by space syntax, one potential model is urban designer Vikas Mehta’s observational study of sidewalk behaviours in three urban neighbourhoods in the Boston metropolitan area (Mehta, 2013). He identified a range of interpersonal encounters that include passive contacts, chance contacts, and contacts with acquaintances and friends. He categorised this range of encounters via *passive sociability* (co-presence but no direct contact with others present), *fleeting sociability* (chance encounters triggering brief, explicit contact with others present), and *enduring sociability* (intentional, regular contact with acquaintances, friends, and community). Mehta demonstrated how these modes of place encounter can be enhanced or weakened by such designable qualities as seating, sidewalk width, variety of goods and services,



environmental attractiveness, permeable storefronts, sense of pedestrian safety, and so forth.

In turning to place *identity*, one notes that space syntax researchers have given minimal attention to place meaning and place attachment, mostly because the approach has emphasised measurable spatial structure – i.e. pathway configuration – as the key for understanding the physical and social dynamics of place. To understand place identity requires attention to user experiences and place meanings. That these themes can be integrated into space syntax theory is demonstrated by space syntax researcher Laura Vaughan's innovative comparative studies of British New Towns, traditional British towns, and urban places in London (e.g. Vaughan, 2006; Vaughan, 2015; Karimi and Vaughan, 2014). By incorporating behavioural observations, interviews, and ethnographic study more broadly, Vaughan's work illustrates how place identity might be incorporated into a space syntax perspective.

In a related way, Hillier (1996, p.194-201) discussed how, in traditional urban areas with short blocks and many streets, children and adults are likely to be found together (Jacobs, 1961, chapter 4). In many public housing estates, in contrast, adults and children are *not* often present together as adult densities fall off rapidly with increasing depth into the estate, while child densities increase, with the result that children spend more time among themselves in larger groups, well away from natural surveillance by adults. In relation to place identity, the significance of these findings is that the children, particularly teenagers, control these inner-estate spaces by occupying them unchallenged and thus identifying these spaces *as theirs*. As these estate spaces are not shared with other user groups, especially adults, they become 'turf'. This situation is an important example of the ways that pathway configuration can separate out users who then claim a mode of environmental identity

that may trigger discomfort and fear for other users who can no longer claim that place. In short, space syntax research has much to offer studies of place identity, particularly if the morphological emphasis on pathway configuration is supplemented with behavioural and experiential evidence gathered from actual places and place users.

By far, *realization* is the place process currently least approachable via space syntax because it assumes an objectivist ontology and epistemology requiring all concepts and evidence to be effable, precisely definable, and operationally measurable. Place realization refers to environmental ambience and character – a 'sense of place' that can only be described qualitatively, partially, and imprecisely. In relation to urban place, Hillier (1996, p.169) used the phrase 'urban buzz' to refer to the unique sense of place of a city or a particular urban neighbourhood. He claimed, however, that too many urban researchers prefer to be 'romantic or mystical' in interpreting this urban buzz rather than realising that, pragmatically, any talk of unique environmental ambience and atmosphere is no more than:

'the co-incidence in certain locations of large numbers of different activities involving people going about their business in different ways. Such situations invariably arise through multiplier effects generated from the basic relation between space structure and movement, and ultimately this depends on the structure of the urban grid itself. In other words, how the urban system is put together spatially is the source of everything else' (*ibid.*).

This explanation presupposes an analytic-relational understanding of the city, which is reduced to pathway structure and visible movements and activities only. From the perspective of synergistic relationality, Hillier's 'urban buzz', although not materially identifiable or measurable, is a *real thing* that speaks to the ineffable lived presence via which different places evoke different environmental ambiances and sensibilities. Hillier (*ibid.*) declared

**Notes:**

<sup>6</sup> There are other significant synergistic understandings of place and place making – e.g. Alexander, 1987, 2012; Bentley et al., 1985; and Jacobs, 1961.

that '[u]rbanity is not mysterious' - but, in fact, it is. Founding this mystery is the lived sensibility of place, which space syntax might help identify by considering in qualitative ways how varying pathway configurations, functional placements, user types, and so forth, support and are supported by contrasting 'spirits of place'. In this sense, a focus on place intensification might provide a research venue whereby the analytical results of space syntax are coupled with synergistic possibilities – for example, Hillier's description of everyday life on a working-class London street versus everyday life on a 1970s London housing estate's upper-level walkway remote from any public street (*ibid.*, p.190-191). He illustrates how the contrasting pathway configurations of these two contrasting places support contrasting patterns of presence and co-presence, which in turn invoke contrasting environmental expectations, images, feelings, and ambiances. His explication offers a penetrating example of how different spatial, physical, and environmental aspects of a place play an important role in different place experiences and senses of place.

**Integrating analytic and synergistic perspectives**

For the synergistic understanding of place presented here, one of Hillier's most important contributions is his critique of the place concept which, he rightly argues, too often emphasises a localist, one-point perspective that reduces the multidimensional complexity of urban place to the visual, formalistic coherence of buildings, streets, and spaces comprising the urban environment (*ibid.*, p.151). As he perceptively contends:

'The current preoccupation with 'place' seems no more than the most recent version of the urban designer's preference for the local and apparently tractable at the expense of the global and intractable in cities. However, both practical experience and research suggest that the preoccupation with local place gets priorities in the wrong order.

Places are not local things. They are moments in large-scale things, the large-scale things we call cities.... Once again we find ourselves needing, above all, an understanding of the city as a functioning physical and spatial object' (*ibid.*).

Though localist qualities are important to the life of any place, Hillier is almost certainly correct when he argues that, at the urban level, *global pathway properties* are the real-world foundation of place vitality. Space syntax demonstrates that many current efforts at town and urban place making are unaware of these configurational qualities, and the practical result is lifeless, empty districts. Space syntax is important because it demonstrates that any thinking and practice that does not understand the intimate, inescapable mesh between pathway structure and place vitality will necessarily fail.

Paradoxically, space syntax's synergistic understanding of pathway configuration arises from an analytic relationality that, via topological interpretation, keeps *pathway parts whole*. In this article, I have sought to demonstrate that in making use of the six place processes, one might locate additional dimensions of urban place that can be incorporated into space syntax so that place might be understood more comprehensively.<sup>6</sup> Most broadly, I have argued that from the perspective of synergistic relationality, place is an integral whole, the dynamics of which intersect, commingle, and interrelate in lived ways that include interaction, identity, release, realization, creation, and intensification. None of these place processes can be isolated from the others nor can they be reduced to various sets of independent and dependent variables. As an ontological structure, place is an environmental locus in and through which individual and group actions, experiences, intentions, and meanings are drawn together spatially and temporally (Casey, 2009; Malpas, 1999, 2006, 2012; Relph, 1976). From the perspective of analytic relationality, place can be broken into imposed, piecemeal parts and con-

nections, but I have attempted to demonstrate that synergistic relationality supports an understanding that is more accurately in touch with the reality of place, both as a concept and as actual places unfolding in real-world situations. In this regard, space syntax is an invaluable, unusual blend of analytic and synergistic sensibilities that might be extended further by incorporating additional dimensions of place as envisioned via synergistic relationality.

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