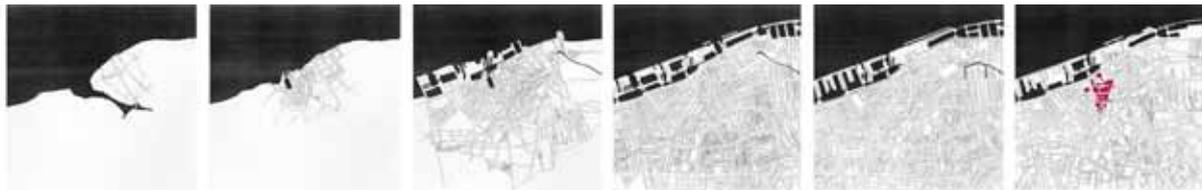


A SPECIES OF EDGES AS METROPOLIS

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The city is an edge phenomenon not only are cities edge in physical and cultural terms, they tend to be born along naturally occurring edge phenomena. Cities have historically sprung from natural edges that 'embrace and enable' cultures. Embrace in terms of foci or naturally occurring phenomena of beauty and 'enable' as some form of intersection, exchange and security. The development of city form can be conceived of as a redistribution of the earth to reflect the patterns of its milieu programmatic activities and expectancies. Kevin Lynch in the *Image Of A City* described the constituents of these patterns as "paths, edges, districts, nodes and landmarks".¹ These city patterns are to an extent developed from and interdependent with underlying natural patterns of landscape. Consequently a more generic set of definitions based on Lynch's such as routes, edges, fields, nodes and foci relates to both natural and our own cultural patterns of landscape. Whereas 'routes' can be seen as the connective and communicative rhizomes linking fields, nodes and foci, it is 'edges' that distinguish. Edges do not only distinguish one thing from the other such as route from field, they distinguish everything within our perceptual field developing complex interrelated and interpretive landscape patterns. "Humans prefer ambiguous, complex patterns in their visual field and that this seems a fundamental perceptual preference".² The city as a spatial and cultural maelstrom of complex and interpretive 'edge conditions' constitutes a perceptually desirable landscape embracing and enabling its milieu to delve into its thickness. Edge conditions and their interpretation are an integral part of our 'mediation' with our environment.



growth from the 'pool' ; maps around; 1665; 1725; 1800; 1860; 1935; 2010

Edge conditions arise as transitions between 'this' and 'that'; they are changes of materials, mediums or fields yielding the edge of a forest or the edge of a shoreline. Edges also emerge as differentiations in 'this' or 'that' through topographic diversity or variations of intensity. Topographic variations may generate the edge of a valley whereas intensity in terms of condensation and rarefaction generate variations in the continuity of flocks and fields such as, trees within a forest or people within an urban square. Any edge has of course a minimum of two conditions: this side and the other side and how the edge is perceived differs when located in 'this' or the 'other'. Contextually edges are somewhere between seams and barriers and are relative to 'being' consequently to us a change in texture of the ground is a seam whereas a cliff is a barrier. Edge conditions can often be indistinct, interpretive or ineffable. The edge of a cloud is indistinct when close to or encapsulated within. The edge of a shoreline examined in detail is particularly indistinct and 'we' become less distinct from our context when considering the perpetual exchange of air and energy through our bodies.



variations in continuity that are indistinct and interpretive

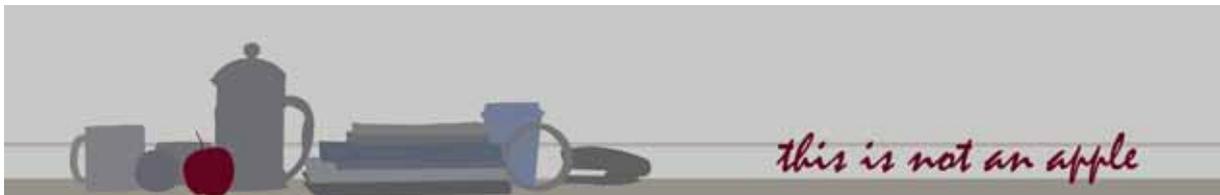
Heidegger argued that 'we' and the world do not exist apart: rather, we are intimately immersed within it and affected by it. He postulated, an "un-dissolvable unity"³ between people and world. Heidegger called this '*Dasein*',⁴ or being-in-the-world. However, the perceived world is comprehended through differences "as my body is sensible sentient, seer and seen, its relations with the visible world fold and

unfold in a double movement of divergence and overlap”.⁵ Perceptual comprehension is dependant on variation in the continuum to distinguish. We separate to comprehend forming a differentiation of things and establishing edges between them in order to recognise and classify. Simmel described this separation to distinguish as ‘an intent of perception’ that subconsciously knows they are related “By disengaging two things from the undisturbed state of nature, in order to designate them ‘separate’, we have already related them to each other in our awareness”⁶



differentiation for an urban classification after Lynch, K; fields, edges, routes, nodes and foci

Edges then are not absolute they are rather interpretive in that we actively separate in order to identify. We examine, dissect, distinguish and classify generating edges to establish distinctive things as separate entities. These edges do not, however, exist as entities in themselves rather we perceive an entities extent and our sensory systems are tuned to actively search for and accentuate variations as extents in order to distinguish. “The perceptual representation of three dimensional shape is lightly to be primarily based on qualitative aspects of ‘three dimensional’ structure -- such as occlusion contours or edges of high curvature whose topological structures remain relatively stable over viewing directions”.⁷ We are attuned to recognise and distinguish through sight, touch, taste, smell and sound variations that we interpret as edges consequently we have developed a repository of ‘edge species’ as pattern aids to the recognition of environmental phenomena. These edge species as patterns are reciprocally used visualisation aids to simulations to understand, anticipate and intervene. Sketching and perspective aided the visualisation and testing of possibilities in the Renaissance, photography and film aided the modern movement and today’s digital simulations are alternative realities.



edges as occlusion contours and pattern recognition

There is also an interrelationship between ourselves and other entity edge phenomena in the perceptual landscape hinted at in Bachelard’s use of Jean Pellerin’s words “The door scents me it hesitates”.⁸ A phrase which actively imbues the doors physicality with determination. There is an interaction with the object and self affecting our behaviour. Piaget termed this interrelationship with our surrounding environment ‘Schemata’ ‘whereby we assimilate (our actions upon objects) and accommodate (objects action upon us) the physicality of our surroundings’⁹ We incorporate physical objects into our behavioural patterns in a reciprocity of influence generating schemata as typological patterns of perception and reaction. “The several members of a lived body move not randomly but with what Maurice Merleau-Ponty called *corporeal intentionality*.”¹⁰



schemata, incorporating objects into our behavioural patterns

Thanks to this intentionality, “the lived body integrates itself with the immediate environment that is to say its concrete place”.¹¹ We move intentionally relative to our environment, which is perceived as

complexly configured patterns, to which our responses are so inherent that we no longer recognise them. These behavioural patterns enable a certain ‘autonomous’ perception and response capability resulting in a selective disengagement from many aspects of our surrounding. “We cannot open our eyes to things without distancing ourselves from what we seek”.¹² We abstract spatial depth structuring it such that it stands separate from us, developing a perceptual depth between ourselves and the environment despite being integral with it. “When this depth disappears and the world is suddenly uncomfortably, encroaching on us, we can see our usual relation with the world for what it is; as privilege, not right--- the depth of our world is a mark of the worlds restraint rather than its indifference towards us”.¹³ This is not to say there is a world of edges without volume and depth rather “each thing we see which advances some of its visibility towards us can only be a thing if other sides of its visible thickness veer back into depth”.¹⁴ Depth and volume exist both as part of entities and of the mediums they are distributed within.



inter-animatedly consuming depth generating reciprocal spatiotemporal signatures

We locate entities ‘in this field’ between the relative horizon and ourselves as percept horizon through “density of texture, differential reflectance and motive parallax”.¹⁵ Our motive intentionality consumes spatial depth as an inter-animate experience of revelation and comprehension. This is as apparent in Le Corbusier’s promenades¹⁶ as it is in Cullen’s notion of urban serial vision¹⁷. However this is not so much a series of views as it is a spatiotemporal signature i.e. “particular directed view sequences and not - particular views”¹⁸ Sequence matters the perceptual landscape is recognised through serial things and our consumption of space through a picturesque landscape or a urban ‘derive’ develops recognisable spatiotemporal patterns. Landscapes are however differentially consumed relative to direction, speed and mode of motion and we are an integral part of this landscape. Our skin is both end and bridge to the spatiotemporal landscape patterns we consume and that we reciprocally create spatiotemporal patterns through. There is an obvious reversibility where the sensing body is both subject and object. Merleau Ponty explained this reversibility through ‘intertwining’¹⁹ Deleuze through ‘folding’²⁰. “The “subject will come to a point of view upon this world and --- will be assembled precisely through the process of folding and intertwining”.²¹



intertwining or folding sequences of inner and outer spaces

Entities within this perceptual depth consist of edge conditions distributed within a visual figure ground landscape. These edges, as typological patterns, do not just relate to spatial things they also relate to processes as the interrelationship and interaction of things within space. Processes happen in spaces and are time dependent time forms their edges. Heidegger refers to experienced time as ‘instants’ as “a succession of now’s.” Bachelard has a more unique view of experienced time “the novel and the instantaneous co-imply each other” and “each instant represents a radical new start” ‘as with the birth of the universe’.²² Time and space are inextricably linked and interdependent as are the edge conditions of processes and spatial things. This can be explained through the analogy of a step as ‘step’ covers both meanings, the action of taking a step and the interval, which is a step. Consequently it describes the processes and the spatiality or the time and space of a step as an edge condition. A step links ‘instants’ of process and spatiality. A step is both end and bridge as an edge is both an end and an intersection. It is perhaps not incidental that mechanical time relies on the serial steps of interlinked rotating cogs. This clockwork action becomes increasingly complex three dimensionally using the

edges of serial cams and the stepping action of ‘cam followers’ between cams to develop complex programmable motion. Skilled masters coordinated the urban skills of cog and watch makers in the eighteenth century to create programmed motion through serial edges and steps building breath taking imitations of nature such as *The Writer* by Pierre Jaquet Droz and *The Swan* by John Joseph Merlin’.²³



a step enabling an interdependence of processes and spatial things

The edge ends and intersects, it holds in and holds out, presenting an impedance to penetration that contains and excludes in a membranous resistance. This resistance creates a hiatus, a drawing out along the edge transition. The movement patterns local to the edge transition developing reflective optimal paths related to gain and necessity, as in the “lex parsimoniae”²⁴ catalysing parallel adjacent routes, as the space of possible movement. Edges as limits therefore tend to co-exist with routes along their extents. These routes developing as promenades of anticipation associated with some form of change relative to their edge condition adjacency. Such routes can be considered as in-between zones, and in their edge coexistence become ‘a priori places’. Indeed as Heidegger reminds us ‘end’ means place. “The old meaning of the word ‘end’ means the same as place: from one end to the other, means from one place to the other”.²⁵ End is a destination, consequently a place, and edges as both end and intersection tend to develop as places of a transitory nature, interstitial a-priori gathering zones.



edge as end and intersection developing a-priori gathering zones in anticipating change

The edge condition in dividing ‘this’ from ‘that’ distinguishes the inside from the outside, the familiar from unfamiliar. In this differentiation we are already placed as ‘this’, the inside and familiar rather than ‘that’, the outside and unfamiliar. Edges are lines of change from ‘this’ to ‘that’ and become symbols of generic change as a liaison with the unknown, the strange and alien which is both dangerous and desirable. Entities from other territories can and do penetrate the edge condition in both directions. Alien entities remaining within another territory, for any extended length of time, become temporal members of ‘this’ territory but retain and radiate characteristics of the unfamiliar, strange and alien. These temporal alien entities tend to have characteristics similar to Simmel’s *Strangers*. They are within this territory, hence a part of the territory through juxtaposition and yet apart from the territory through conditioning in another territory. ‘They constitute a unique transitory position of mobility and objectivity’ “the stranger is freer practically and theoretically; he surveys conditions with less prejudice”.²⁶ Edges as bridges to alien territories are place as a threshold territory.



strangers conditioned in other territories gravitate to edge exchange territories

We are drawn towards the edge, towards the limits, the margin, to provoke an ‘on the edge’ experience associated with mental change in adjacency to physical change. Moving to the edge ‘is

both a physical and a symbolic separation from our customary social or mental condition. This is followed by an engagement with the 'in-between' space as the parallel a-priori place within which "we must regard the period of margin or liminality as an inter-structural situation".²⁷ The edge as a-priori place enabling a physical and mental disengagement usually enacted through a 'pilgrimage promenade' gazing into the other whilst mentally scrutinising current values and axioms. The edge with its ability to co-locate change and place acts as a catalysis for inner-mental processes that dissolve the accepted orders and creates a fluid malleable cognitive state.



marginalised to an inter-structural situation for a fluid malleable cognitive state

Processes tend to be encouraged along spatial edges and vice versa. Processes happen in space at particular locations forming events. Time and space are considered as inextricably linked as are the particularities of event and place, and they are distinctively reliant on edges as both defining extents and connective interfaces. Edges encourage processes through selection and overlapping in that they are both boundaries and meeting places. An edge is selectively permeable as an end and an intersection. The edge as end holds in or out encouraging overlapping and subsequent interaction. As intersection the edge catalyses interface and exchanges with other entities and spaces. Edges are thus both resistant and porous in a selective permeability that can also be environmentally responsive. As organic membranes are environmentally responsive to porosity so too are our walls as cultural membranes. Whilst windows allow a certain level of perceptual exchange across a wall, a door or gate enables a completely different level of 'privileged' exchange'. Privilege here means entities need to possess certain conditions in order to penetrate the edge. This may be size, shape or a time related. Entities have a pass, a visa.



the edge as gate way and city 'raison d'eter'

This adaptable porosity of the edge condition is key to the success of its adjacent territories as places and their subsequent growth into constellations of places as city through the intensity of routes and foci at the lines (edges) of change and exchange. An edge is in itself a focus ('foci' the extent 'end' we perceive) and an intersection consequently edges catalyse routes which in combination catalyse places, which tend towards centralities as a kind of perceptual and conceptual holding - folding together. These centralities anchor the self psychologically and can be split into private or public typologies. The house as home is an example of private centrality and is the essence of the act of dwelling.²⁸ Public centralities tend to be urban spaces or (accessible) foci of some intensity. Here space as place is an in-between that holds and resists having the effect of gathering through the membranous resistivity of their surrounding edge conditions. These public places in cities constitute a three dimensional plurality of edge phenomena acting together to co-locate 'space and time' enabling an overlapping of certain processes in space and their subsequent interaction. Places gather processes in a catalytic space - time hiatus generating events. Place identity is related both to the unfolding physical qualities of the space and the processes as unfolding sequential actions within it. There is a space, process interdependence of edges defining place where place co-locates processes within space developing events that reciprocally reinforce that places identity and recognition. Times action is revealed where

change happens and edges, as boundaries are where changes occur. The edge is where happenings intensify it is the co-location of phenomena in place that catalyses events. “All human action takes and makes place. The past is the set of places made by human action. History is a map of these places”.²⁹

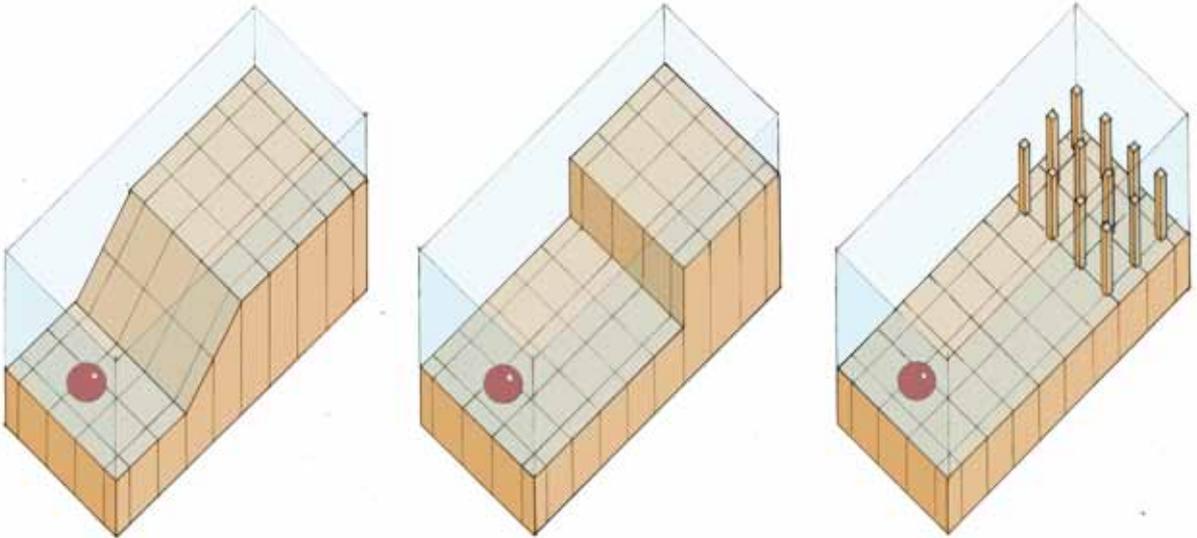


concert square 'place' as a three dimensional plurality of edge conditions

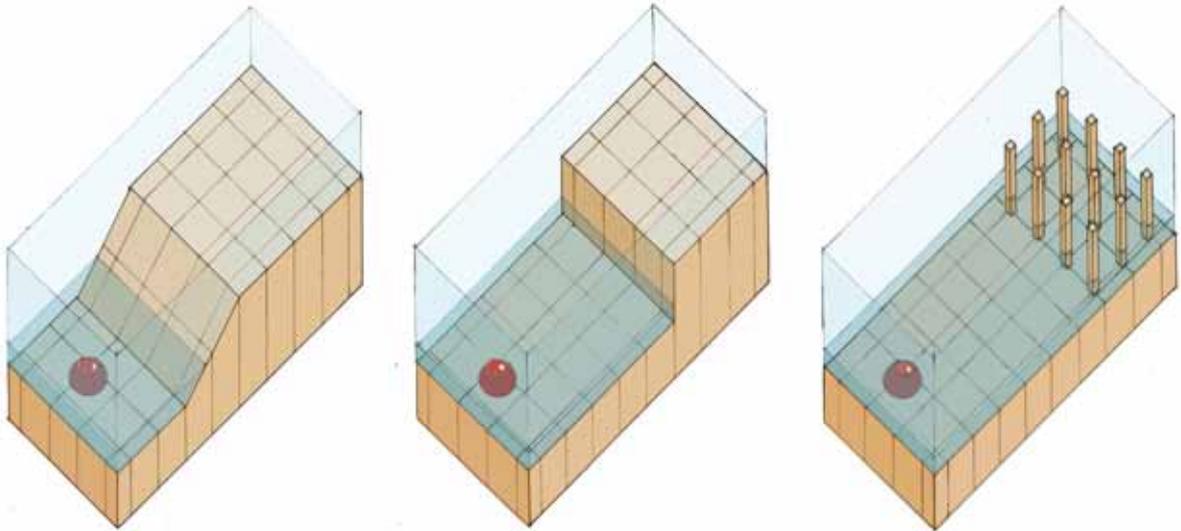
Topographic locations with dynamic edge-mental conditions tend to develop into serial places as city. The friction generated by the density of a city's edge conditions generating overlap to gathered processes enabling an intensity of events. City is event-mental reflecting an underlying structured edge condition system associated with our activities and expectancies as preferences of perception. These perceptual preferences appear to be in a *aufhebung*³⁰ state. We develop a perceptual distance between ourselves and the perceptual landscape, accommodating many of its patterns in schemata, whilst preferring complexity and ambiguity in the perceptual landscape? This contradiction is also reflected in the social structuring of the inhabitants of a city. Nurses, policemen and sanitary workers help maintain a structured distance of the perceptual landscape by keeping sickness crime and rubbish away, whilst artists, actors and designers venture to generate a complex and interpretive experiential landscape as cultural events “We are able to experience the world as keeping its distance, in part because many other people are preventing it from collapsing in on us”.³¹



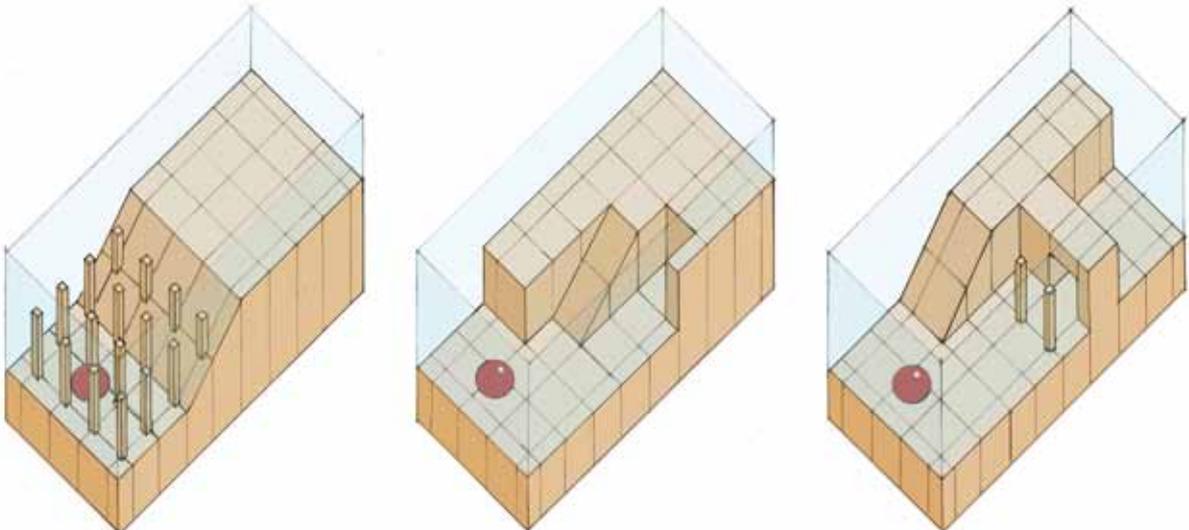
reconstructing the city events, cyclical and unique



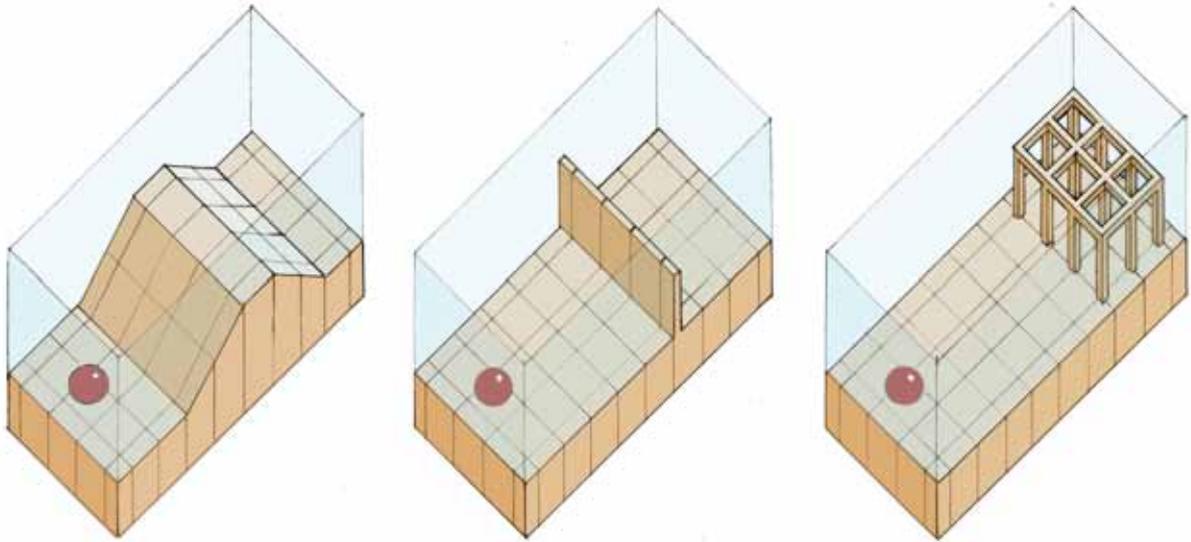
simple topographic edge conditions, single medium; left to right; slope; cliff, field.



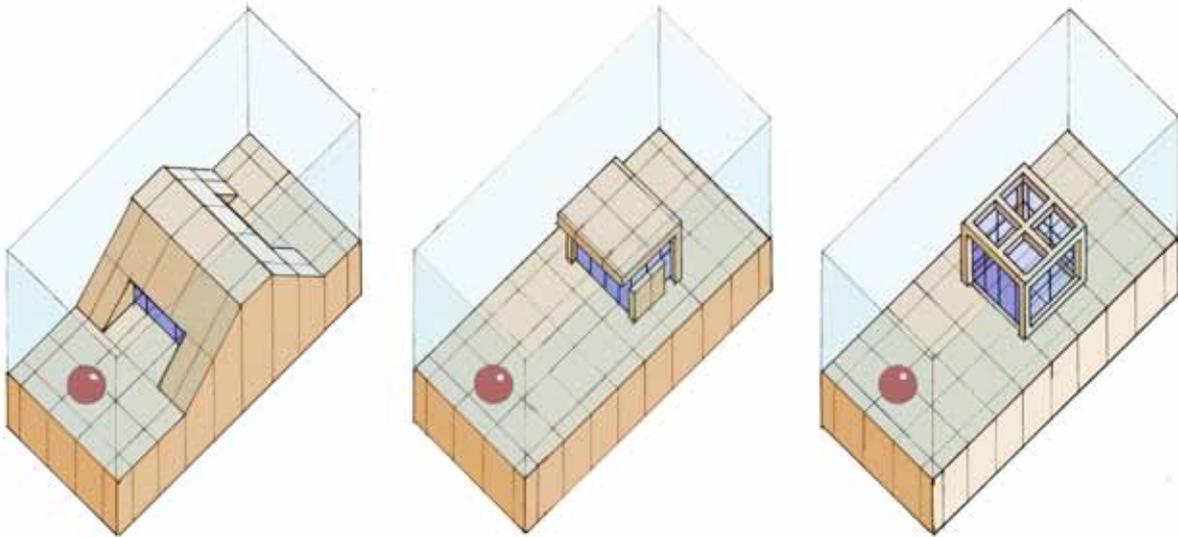
simple topographic edge conditions, dual medium; left to right, slope, cliff, field.



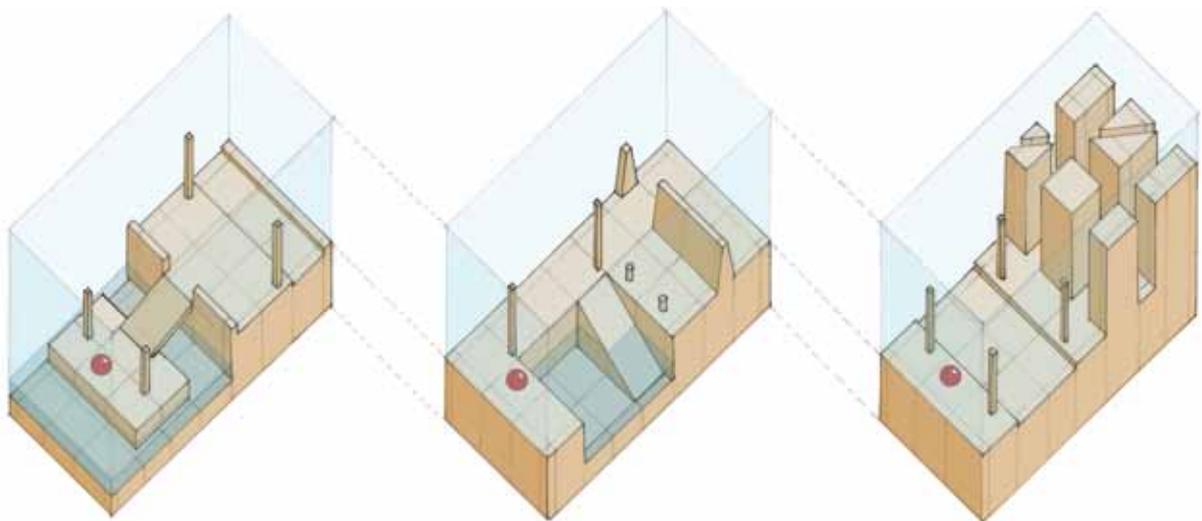
combination and permutation examples of topographic edge conditions, single medium.



artificial edge conditions single medium, left to right; mass, plane, frame



artificial edge conditions as habitation, left to right; mass, plane, frame



serial edge conditions; pier and promenade; dock and wall; ring-road and city-edge

¹ Kevin Lynch. *The Image of a City*. MIT Press (1960) 99-102. The interpretive abstraction of Lynch's terms was so that they could be applied to both the natural and artificial (cultural) perceptual landscape related to a series of urban projects undertaken in Liverpool and Kansas City

² Amos Rapoport & Robert E Kantor; *Complexity and Ambiguity in Environmental Design* Journal of American Institute of Planners Volume 33 Issue 4 (1967) 210

³ David Stewart and Algis Mickunas; *Exploring Phenomenology: A Guide to the Field and Its Literature* (Ohio University Press; 2nd Revised edition edition; 1990) 09

⁴ Martin Heidegger, *Being and Time: A Translation of "Sein und Zeit,"* trans. Joan Stambaugh (Albany: State University of New York Press, 1996) 170. Dasein "entangled-disclosed, thrown-projecting being-in-the-world which is concerned with its own most potentiality in its being-together with the 'world' and in being-with with the others". Taken from an explanation by Craig M. Nichols. *Primordial Freedom: The Authentic Truth of Dasein in Heidegger's 'Being and Time'*. In: *Thinking Fundamentals, IWM Junior Visiting Fellows Conferences, Vol. 9: (Vienna 2000), 02*

⁵ John Wylie. *Depths and Folds on landscape and the gazing subject; Environment and Planning D; Society and Space* vol 24 (2006) 526

⁶ Georg Simmel, (trans. Mark Ritter). "Bridge and door; (Brucke und tur)". *Theory, Culture and Society* SAGE Vol 11 (1994-09-19), 05

⁷ James T Todd; *The visual perception of 3D shape; Trends in Cognitive Science; Vol 8 No 3 March 2004* p 120

⁸ Gaston Bachelard., *The Poetics of Space; Beacon (1969) 223* quoting; Jean Pellerin's *La Romance du Retour; Editions de la Nouvelle Revue Francaise (1921)*

⁹ Jean Piaget,.; *The Psychology of Intelligence. Totowa, NJ: Littlefield Adams & Co. 08 (1960)* Routledge (1999) 08

¹⁰ Maurice Merleau-Ponty. *Phenomenologie de la Perception. Gallimard Paris 1945 : English edition Phenomenology of Perception. Routledge and Kegan Paul (1962)*

¹¹ Edward S Casey,;. *How to get from Space to Place in a Fairly Short Stretch of Time, in Senses of Place* Ed Steven Feld and Keith Basso, H. School of American Research Press (1996) 22

¹² Michel de Certeau. "The Madness of Vision", trans. Michael B. Smith, in *Enclitic 7:1 26 (1983): 24-31*

¹³ Susan. M Bredlau. *A Respectful World: Merleau-Ponty and the Experience of Depth; Springer, Science+ Business Media B,V. (2011) 412*

¹⁴ Alphonso Lingis, *The Imperative, Indiana University Press, Bloomington, IN (1998) 53*

¹⁵ James J Gibson. *The Ecological Approach to Visual Perception; Ithaca N.Y; Cornell University Press (1976) 117*

¹⁶ Flora Samuel. *Le Corbusier and the Architectural Promenade. Basel Birkhauser (2010) 223p*

¹⁷ Gordon Cullen. *The Concise Townscape. Architectural Press Routledge NY (1961 1971) 15*

¹⁸ James V Stone. Object recognition; View-specificity and motion-specificity. *Vision Research* 39 (1999) 4032

¹⁹ Maurice Merleau Ponty *Le Visible et l'invisible, suivi de notes de travail* Edited by Claude Lefort (Paris: Gallimard, 1964) *The Visible and the Invisible, Followed by Working Notes* trans. by Alphonso Lingis, (Evanston: Northwestern University Press, 1968).

²⁰ Giles Deleuz. *Le pli - Leibniz et le baroque* Editions de Minuit (1988). *The Fold: Leibniz and the Baroque*. translation Tom Conley. The Athlone Press London (1993)

²¹ John Wylie. Depths and Folds on landscape and the gazing subject; *Environment and Planning D: Society and Space* vol 24 (2006) 530

²² Casey; Edward, S,. Taking Bachelard from the Instant to the Edge; *Philosophy Today* Volume 52, Issue Supplement 51, (2008); 32

²³ Mechanical Marvels Clockwork Dreams; BBC documentary presented by Professor Simon Schaffer; Director Nic Stacey; BBC 4 Mon 21st October 2013; ref <http://www.youtube.com/watch?v=5rVevX-YXqo>

²⁴ Peter; Haggett. *Locational Analysis in Human Geography*; St Martins Press (1966) 32

²⁵ Martin Heidegger.; *The End of Philosophy and the Task of Thinking* (1969) under; *Basic Writings*, Martin Heidegger; Editor Krell, David F; Harper San Fransisco (1976) 375

²⁶ Georg Simmel; *The Stranger; The Sociology of* ; Georg Simmel ;Translated and Edited by Kurt H. Wolff ; The Free Press, Glencoe, Illinois; (1950); 404

²⁷ Victor W Turner, "Betwixt and Between: The Liminal Period in Rites de Passage", in *The Forest of Symbols* Ithaca, NY: Cornell University Press, (1967) 23

²⁸ Gaston Bachelard., *The Poetics of Space*; Beacon (1969)

²⁹ Philip J Edington; 'Groundwork' for a Spatial Theory of History; *Rethinking History*, Volume 11, Number 4, December Taylor & Francis; (2007) 465

³⁰ Hegel's, *Aufhebung* or *aufheben*. There is a dialectic interplay of terms or concepts, which through conjunction both preserves and amends their meaning to a heightened level. To destroy to recreate in a new form elevated yet preserved. Transmute is the closest English term see John Grier Hibben. *Hegels Logic; An essay in Interpretation*. Charles Scriber's Sons NY (1902) 313

³¹ Susan M Bredlau,. *A Respectful World: Merleau-Ponty and the Experience of Depth*; Springer, Science+ Business Media B,V., (2011) 422

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