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INTUITIVE CITIES: PRE-REFLECTIVE, AESTHETIC AND POLITICAL ASPECTS OF URBAN DESIGN

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ABSTRACT

Evidence affirms that aesthetic engagement patterns our movements, often with us barely aware. This invites an examination of pre-reflective engagement within cities and also aesthetic experience as a form of the pre-reflective. The invitation is amplified because design has political implications. For instance, it can draw people in or exclude them by establishing implicitly recognized public-private boundaries. The Value Sensitive Design school, which holds that artifacts embody ethical and political values, stresses some of this. But while emphasizing that design embodies implicit values, research in this field lacks sustained attention to largely unconscious background biases or values, rooted in cultural attitudes and personal interests, that lead theorists and planners—often too narrowly—to promote design organized around specific values such as defensibility. In examining these points, I draw on J. J. Gibson, a central figure for some writing on aesthetics and cities, and whom pragmatists and phenomenologists in turn influenced. Taking a cue from pragmatists in particular, I argue that Gibson's perceptual theory of affordances entails a theory of values, meaning our perception and therewith movements are inherently value-based. I advocate design that accounts for relatively constantly held values such as safety, while also handling the vast pluralism that exists and not crushing the aesthetic vibrancy of city life.

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I. Introduction

Scholars from philosophy, psychology and urban studies have argued that life unfolds with relatively little reflection, yet nonetheless intelligently, with classical phenomenologists especially known for this view.[1] A growing number of scholars, ranging from Mark Johnson and Jesse Prinz to Jay Schulkin, also maintain that aesthetic experience is at the root of most of our engagements. As Schulkin, a neuroscientist and commentator on pragmatic philosophy, notes: "Information-processing systems," which are not separate from emotional capacities, "pervade aesthetic judgment; our representational capacity, the play and flexibility of cognitive systems, the detection of discrepancy—all are reflective of our aesthetic judgments."[2] The environmental psychologists Rachel and Stephen Kaplan repeat the idea, and wed it to the opening point by building on J. J. Gibson's theory of affordances,

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proposing that aesthetic experience originates in rapid and unconscious appraisals of how we can act in different settings.[3]

Evidence—not to mention common sense—affirms that aesthetic contact with the world shapes patterns of movement, so that urban landscapes can repulse or draw in and do considerably more, often with people barely aware of influences guiding them. This invites an examination of pre-reflective engagement within cities and also aesthetic experience as a mode of the pre-reflective. The invitation is made more pressing because movement within urban settings is political, albeit sometimes subtly. To cite an extreme example, more than one commentator has argued that New York City planner Robert Moses placed low overpasses strategically to impede bus transportation from poor and especially black neighborhoods to Jones Beach.[4] There are also documented cases of design facilitating or thwarting political protests.[5] Value Sensitive Design schools, which hold that artifacts embody ethical and political outlooks, stress just these points; and the relative newness of the field highlights that the value-ladeness of design has historically gone mostly unnoticed, which in turn emphasizes the opening claim: that everyday life unfolds with relatively little reflection, yet nonetheless intelligently.

In advancing the case laid out above, and specifically arguing that Gibson's theory of affordances implies a theory of values, I review and defend the accounts of Jane Jacobs, William Whyte and the Kaplans, which I think remain largely legitimate today. I connect their work to Value Sensitive Design research, and also to pragmatists and phenomenologists, who are in the historical lineage via Gibson leading to the Kaplans, even if the latter are unaware of it, with pragmatists especially emphasizing that we register nearly everything in terms of values. As with most writers on urban design, I want to promote livable spaces. This means spaces that are not overly shaped by the values of one group or historical context, yet also not so undefined as to generate chaos. I focus on social implications of design and aesthetics: how they can establish implicitly recognized public-private boundaries and permeable transitions zones, cultivate contrasting patterns of human contact, and affect everything from security to social inclusiveness to the overall vibrancy of cities.

II. Pre-reflective life

During the Modern era a growing number of authors, such as Nietzsche and Freud, began to speculate that much of psychic life occurs below or just at the limits of consciousness.[6] Experimental psychologists have likewise suggested that human consciousness is limited. People can keep only a small number of things in mind at a given moment—between five and nine items is established as typical,[7] though the number may be less.[8] Numerous researchers hold that consciousness, in psychoanalytic language, is just the tip of the iceberg. In the admittedly problematic parlance of cognitive psychology, this translates to the bulk of information processing transpiring automatically, with little or no reflective thought. "Categorization, assumption, and inference often occur without awareness,"[9] and "[a] considerable amount of evidence indicates that as compared with consciously controlled cognition, the nonconscious information-acquisition processes are incomparably faster and structurally more sophisticated."[10]

Some cognitive psychologists describe two parallel, interacting modes of human information processing: an explicit, predominantly rational mode, and an implicit, more emotionally driven mode,[11] which, "[r]esearch on animals, brain damaged-patients, and neuroimaging

studies of healthy subjects" show "can be dissociated from each other functionally and anatomically."[12] The explicit mode—what Seymour Epstein calls the "rational" mode[13]—is analytical, abstract, verbal, deliberative and relatively affect-free. It deals more with declarative than procedural knowledge, and involves more thinking than doing. It often comes into play when people are confronted with something new or attempting to figure their way through some unexpected and novel situation. The implicit, or what Epstein calls the "experiential" mode, by comparison, is more intuitive, automatic, non-verbal and intimately associated with affect, though not exclusive of non-affective cognition. When considering the implicit mode one does well to think about life in the everyday world—the world, as Edmund Husserl put it, "that is actually given through perception, that is ever experienced and experienceable—our everyday life-world."[14] As a more emotionally driven form of engagement, the implicit mode includes "gut-responses," nearly instant appraisals, actions impulsively taken. It also encompasses cognitive heuristics and schemas, that is, ingrained and implicit patterns of thinking and doing, with tacit assumptions that lead to nearly instant judgments. Relative to the explicit mode, implicit engagement is more effortless and rapid, though sometimes at the cost of flexibility. It is nearly always in play, even in tasks judged to be the pinnacle of human intelligence: master chess players, composers and surgeons "report automatic processing ... and feel they operate without conscious thinking."[15]

An alternative account, though one that arrives at the same conclusion, is developed by thinkers believing that a great deal of perception and cognition is constituted through bodily actions, which are, almost by definition, pre-reflective. John Dewey, Maurice Merleau-Ponty and to a lesser extent Martin Heidegger are all advocates of this view as are contemporary figures working in embodied cognition such as Andy Clark, Anthony Chemero, Shaun Gallagher, Alva Noë and Evan Thompson, who are, to varying degrees, influenced by pragmatic and phenomenological traditions. These scholars suggest that active bodies are comparable to Kant's *a priori* insofar as they underlie integrative and in some cases calculative tasks, as when the knee processes complex problems of physics when walking,[16] so that, as Clark put it, many "computational … operations are implemented" through bodily action, suggesting "operations are not in the neural system alone but in the whole embodied system located in the world."[17] World-body interactions also structure experience. Merleau-Ponty explains, for instance, that "[s]moothness is not a collection of similar pressures," that is, it is not merely an aggregate of sensations received by and integrated in the brain; it is also "the way in which a surface utilizes the time occupied by our tactile exploration or modulates the movement of our hand"[18] and thereby gives form to experience. Thus, Merleau-Ponty adds more generally, "consciousness"—or perhaps more properly, the structures underlying it, "is in the first place not a matter of 'I think that' but of 'I can.'"[19] Dewey offers an essentially identical account in the pragmatic tradition.[20]

On this bodily understanding, the cognitive or Freudian unconscious finds its analogue in what Dewey calls "deep-seated habits or organic 'memories,'"[21] or what Heidegger thought of as readiness-to-hand.[22] In line with accounts from cognitive psychology, however, this does not imply unintelligent, reflexivities. Rather, "in contrast to the stimulus-response argument of the behaviorist perspective," as David Seamon elucidates, echoing Merleau-Ponty, pre-reflective doings are "not a chain of discrete passive responses to external stimuli;" instead, "the body holds within itself an active, intentional holistic capacity which intimately 'knows' through action the everyday environments and spaces in which the person lives."[23] With smartphones, for example, our hands' practical know-how cannot be

merely a conditioned, mechanical response. If it were, then adjusting to a phone or tablet of a different size would be nearly impossible.[24] Seen accordingly, practical know-how of smartphones is an intelligent, embodied understanding of how to negotiate a world of digital devices—one that occurs not necessarily without awareness, but pre-conceptually and in this sense pre-reflectively. Accordingly, most only "know" the keyboard in use, and could not draw a diagram of its layout from memory, and we only tend to encounter the phone as a detached objective or conceptual object when it is not working properly.[25]

Smartphones are just one case among many, and what holds here applies to urban life, albeit more so. It applies more because urban life is thoroughly embodied. Cities and architecture are, as it were, art we can move through, participate with and change. They are sites of daily, habitual attitudes and activities, or what Jacobs calls street ballets. In the words of Johnson, accordingly, architecture and urban settings are "beautifully situated right at the heart of [the] organism-environment transaction." They are "spatial and bodily, and so [they emerge] from and [draw] on our pre-reflective bodily engagement with the physical dimensions of place and space."[26]

III. Movement and pre-reflective life

Two points emerge from the discussion so far. One is that everyday life is predominantly pre-reflective, meaning we do things with little conscious awareness. Indeed, evidence suggests we are often unaware of even our preferences, with Whyte remarking: "How many people would say they like to sit in the middle of a crowd? Instead, they speak of getting away from it all, and use terms like 'escape,' 'oasis,' 'retreat.' What people *do*, however, reveals a different priority."[27] A second point is that perception is linked to movement. This follows obviously from the fact that we use perceptive faculties to navigate. It also follows from embodied cognitive science, which is influenced by the thought of Gibson, who was, in turn, influenced by pragmatists and phenomenologists.[28] Gibson and his intellectual ancestors and offspring argue that we see things in terms of what it is possible to do or what he called "affordances,"[29] and, indeed, if we did not see walls as obstacles, hallways as traversable, rivers as dangerous or navigable, we would be functionally blind.

Emphasizing all of these ideas, the Kaplans propose that aesthetic appraisals reflect "a very rapid (albeit unconscious) assessment of what it is possible to do in [a] setting,"[30] while Stephen Kaplan, referencing Gibson in particular, concludes aesthetic perception falls within what Gibson called affordances.[31] Thus while aesthetics tends to be undervalued—with many regarding aesthetically pleasing design as desirable but ultimately dispensable—aesthetic experience, as something that undergirds perception itself, "is not the reflection of a whim that people exercise when they are not otherwise occupied." It appears rather "to constitute a guide to human behavior that has far-reaching consequences,"[32] and one that occurs with rapid unobtrusiveness that often leaves us unaware we are making judgments. The phenomenon is comparable to "[t]he rapid intuitive evaluation by people of other people."[33]

Stephen Kaplan's background in computer sciences, i.e., information theory, influences the Kaplans' views on aesthetics. Though cautioning that their "version of…information-processing ... in many respects is different from the way computers process information,"[34] the two versions are similar in one important regard: both make a conceptual link between "information" and "uncertainty." In this way the Kaplans follow information theory a computational model, first proposed by Claude Shannon in 1949, that mathematically equates

information to uncertainty. Here more complex and hence larger bundles of information are said to involve greater amounts of uncertainty. Hence, as Warren Weaver explains, "bits," the basic binary units in computing, are mathematically equivalent to the number of yes-no questions one would need to ask in order to determine the answer to a question.[35]

Uncertainty enters the Kaplans' aesthetic research because, for example, in the same way that some works of art have an ambiguous quality that pulls audiences into them, some settings have an enticing uncertainty that draws people to penetrate deeper. Some of their experiments show that people are especially tempted by settings with trails disappearing around bends or with well-lit clearings partially occluded by intervening foliage. They characterize these scenes as having a sense of "mystery"—an allure that comes of things being partially hidden.[36] These mysterious settings are preferred over highly occluded ones that give little hint of what lies out of view, but also over open scenes that leave nothing to the imagination. "Mystery," as described by the Kaplans, "involves not the *presence* of new information, but its promise"[37]—a promise only actualized, however, through further movement. Here "there is partially hidden information, and *something in the scene tempts one to explore further*."[38] Some Japanese gardens employ this principle. The view is never completely obstructed, yet never completely open. No matter where one stands, one can never see the entire garden. With something always left uncertain and hidden beyond the next bend, one is continually drawn further through the setting. As part of daily exploratory activity, such behavior can be characterized as habitual, and it occurs more as an emotional pull than a reflective decision to reduce uncertainty. In the Kaplans' words, preference "is generally not the result of conscious calculation. In fact, people are often willing to indicate their preferences based on the briefest glimpse, permitting no opportunity for careful reflection."[39] Despite the clunky cognitive language, the Kaplans' picture characterizes the everyday phenomenology of city life where we are enticed by narrow streets with gentle curves, or places where vendors are set up, not just because we are interested in wares, but also because we wish to see what is being sold, which is to say, discover what is currently out of view.

While ambiguity is important, so too is definition, which can attract but also lead people to pause. The phenomenon is well known in everyday life, as when we are pulled to a corner table at a restaurant, as if seeking shelter; and it applies to urban spaces as well where people "show an inclination to station themselves near objects, such as a flagpole or a statue." "They like"—and slow to dwell at—"well-defined places, such as steps, or the border of a pool."[40] Jacobs makes just this point too, adding, however, that perimeters should be "spots of intense and magnetic border activity,"[41] not hard boundaries. She proposes amenities that amplify activity around perimeters, along with measures to draw cross-border movement, for example, a skating rink at the periphery and a café across the street where skaters can get refreshments and watchers observe the skaters. She suggests other features that intensify activity around borders—for instance, checker pavilions along the perimeter of a park. Quoting Kevin Lynch, Jacobs asserts that a border can be "a seam rather than a barrier, a line of exchange along which two areas are sewn together."[42] Thus while enclosure serves aesthetic and functional purposes, borders in public spaces benefit from a certain amount of ambiguity and permeability, as the Kaplans also suggest. Also agreeing with their views is that aesthetic perception of settings forms around what we can do in them and what they invite us to do, meaning experience coheres around action.

The Kaplans accordingly argue that features giving definition to a space, and therewith shaping possibilities of movement, often increase its attractiveness, yet only to a point:

overly strong boundaries are not generally preferred. Arnold Berleant expresses the same principle when he describes how some plazas, parks and buildings "confront us with solid, opposing planes" that repel, whereas others are "participatory"; they "encourage entry; they ... evoke our interest and draw us in."[43] Berleant adds that the invitation to participate is nowhere "more pronounced than in the case of entrances, doorways, and stairs. They can put one off or lead one in."[44] This too can be grasped in terms of uncertainty and tacit or pre-reflective invitations to movement, for Whyte observes that popular plazas tend to have permeable borders—or, as he put it, a "cordial relation with the street"[45] that inspires entry. The porous border of New York City's Paley Park, for instance, "stimulates impulse use. Many people will do a double take as they pass by, pause, move a few steps, then, with slight acceleration, go up the steps." According to Whyte, this is partly explained by the fact that "[t]he steps at Paley are so low and easy that one is almost *pulled* to them. They add a nice ambiguity to your movement. You can stand and watch, move up a foot, another, then, *without having made a conscious decision*, find yourself in the park."[46]

If our pre-reflective consciousness of the world is more a matter of "I can" than "I think," as Merleau-Ponty suggests; or, as Johnson says in a mix of Deweyan and Gibsonian language, if things and settings are experienced as "clusters of affordances of possible interactions we have had, or might have,"[47] then it is easy to see why a slight elevation and run of stairs beckons people, whereas usage falls with increases in height and the addition of other features that more definitively separate the space from abutting streets and sidewalks. Slight variations have large impacts. Whyte points out "[o]ne plaza that people could be expected to use, but don't, is only a foot or two higher than two comparable ones nearby." Although the difference is slight, the plaza "seems much higher. The steps are constricted in width, sharply defined by railings, and their pitch is brisk. No ambiguity here; no dawdling; no drifting up."[48] Of course, other factors are at play, so that the low sweep of stairs and porous border of Paley would not draw in people if a cesspool were the centerpiece. While this is so, it is also the case that "[m]agnificent views and handsome landscaping fail to operate as demand goods; maybe these 'should,' but demonstrably they do not. They can work as adjuncts only."[49] Urban aesthetics is about more than just sheer beauty.

An additional line of thought emphasizing the pre-reflective—and one less cognitivist than that advanced by the Kaplans—comes from the observation that we spend much of our time in practical, habitual modes of engagement, what Heidegger terms "readiness-to-hand." Smartphone keyboards, for example, which most only know in use and could not draw from memory, are an example. This phenomenon manifests too in urban life. Jacobs describes the situation when discussing everyday rituals she observed and participated in during her time in Greenwich Village:

> The stretch of Hudson Street where I live is each day the scene of an intricate sidewalk ballet. I make my own first entrance into it a little after eight when I put out the garbage can, surely a prosaic occupation, but I enjoy my part, my little clang, as the droves of junior high school students walk by the center of the stage dropping candy wrappers. […]
>
> While I sweep up the candy wrappers I watch the other rituals of the morning: Mr. Halpert unlocking the laundry's handcart from its mooring to a cellar door, Joe Cornacchia's son-in-law stacking out the empty crates from the delicatessen, the barber bringing out his sidewalk folding chair, Mr. Goldstein arranging the coils of wire which proclaim the hardware store is open.[50]

Jacobs goes on to describe a variety of other morning rituals. Then, she writes,

> It is time for me to go to work too, and I exchange my ritual farewell with Mr. Lofaro, the short, thick-bodied, white-aproned fruit man who stands outside his doorway a little up the street… We nod; we each glance up and down the street, then look back to each other and smile. We have done this many a morning for more than ten years, and we both know what it means: All is well.[51]

Paraphrasing Jacobs, Seamon described the "habitual, routine qualities" of this street ballet as "an *unselfconscious* context for informal, regular interactions of residents and users."[52]

This ballet, which is just one of many urban dances, has the flow of a stream, with its gurgle and occasional hubbub, and like a stream it can range from soothing to threatening. As with dances, it cannot be fluidly enacted if not subsumed in daily habits, that is, responsive and evolving routines that occur with awareness but little reflection. Over time, Seamon explains, interactions mature into a sense of community—or, as Jacobs puts it, "a web of public respect and trust"[53]—that bestow definition and a feeling of place. A locale then becomes a place we inhabit, not in the sense of physically living there, but in the sense that we are at home. This can, but does not always, include a house, and can equally encompass a neighborhood, park or favorite sidewalk.

IV. Design, affordances and values

The notion of "affordances" owes an intellectual debt to pragmatism, with one of William James's students, Henry Holt, teaching Gibson,[54] and Gibson's theory relating to the pragmatist claim, especially emphasized by James, that we cannot think in the absence of interests. With a little extrapolation, this suggests that we cannot perceive without them either. In the case of a river, we might perceive a barrier, perhaps something drinkable, navigable, cooling, freezing or treacherous, which means in terms of actions we might take and their effects on us, and hence in terms of use-value and consequently interests. This illustrates how affordances can loosely be understood as values. In turn, this understanding suggests Gibson's account, and those it has influenced, ought to be taken as an intellectual precursor to Value Sensitive Design, an approach accounting "for human values in a principled and comprehensive manner throughout the design process."[55]

Though not originally focused on architecture and urban design, theorists have begun applying it to the field. Jeroen van den Hoven, for example, notes that garden cities of the early twentieth century reflect the value that low-income families are entitled to green spaces,[56] and Rajiv Shah and Jay Kesan observe that marble in financial institutions signifies a value placed on trust, reliability and security.[57] Other features embody the value of defensiveness or exclusivity. So in the same way that spaces may repel entry through strong, unambiguous delineation, as discussed by Berleant and Whyte, they may also do so by expressing hostility towards the surrounding environment. Edmund Bacon and more recently van den Hoven talk about target hardening in fortresses, which exemplifies the point. The bases of such structures are "completely dominated by the need to resist the hostile environment outside." There are limited entrances, no windows, rugged surfaces designed to deflect missiles and "inward-looking convex forms [to] produce the minimum surface exposure for the maximum interior volume."[58] At higher levels where the risk of intrusion is less, the design is more delicate and open to the surrounding space.

Non-physical barriers or affordances can have similar effects. The notion of affordance—that is, the idea that we perceive the world in terms of how we can move and handle things

and the ease with which we can do so—accordingly applies not only to physical restraints; it operates also on a symbolic level, and so understood, Bacon's remarks have implications for the design of public spaces. For instance, the *Harold Washington Library Center* in Chicago, a public building, is modeled in a Renaissance style recalling the *Medici-Riccardi Palace* in Florence, a private structure that was designed to repel outside intrusion. As with the palace, the library has a fortified appearance at street level where its windows are small and its masonry rough. Higher up its appearance is less defensible, with gigantic windows and delicate masonry. The small elegant brass doors are dwarfed by the building, and resemble the entrance to an exclusive hotel. One doubts whether users feel pulled into this building in the manner described by Whyte and Berleant. Intended or not, this building affords values contrary to its public use.

While arguably employed inappropriately in this instance, some theorists—including Jacobs but more prominently Oscar Newman—have argued that such design features can be put to good use. Newman, in his landmark book *Defensible Space*, proposed a model of urban design that inhibits crime by cultivating "an environment in which latent"—or one might say pre-reflective—"territoriality and sense of community ... can be translated into ... a safe, well-maintained living space."[59] Newman, who is criticized today,[60] yet also taken seriously,[61] and who was interestingly exposed to if not influenced by Heidegger and Merleau-Ponty,[62] claims that many inner-city housing projects are vulnerable to criminal intruders because non-residents can approach with little feeling of entering into privately controlled territory. For example, one development consisted "of large high-rise slabs sited on grounds intentionally left open for use by both the resident population and the surrounding community. Each building [was] entered directly from the public grounds."[63] With no intermediary zones marking the transition from public to private territory, residents are less likely to spot potential intruders and feel entitled to question them. Newman suggests amending this by incorporating markers—or what are in practice symbolic affordances—that communicate the progression into increasingly private space such as a curb or decorative fence, followed by a lawn with a walkway leading to a lobby. A stranger moving through these zones will feel increasingly conspicuous and be increasingly pronounced to inhabitants and subject to their questions. "Design can make ... both inhabitant and stranger ... perceive that an area is under the undisputed influence of a particular group."[64]

Developed social networks can do the same. Thus while crime sometimes increases with the height of the building in low-income neighborhoods,[65] Newman argues that "for low-income elderly, the high-rise apartment building seems to work very well indeed."[66] As a contrasting case, he discusses a study showing that smaller, older dormitories, with narrow corridors and a limited number of entrances, cultivate a stronger sense of community than a newer, massive structure with a large entrance. In the newer dorms, students were said to almost universally adopt a "loner" attitude, and incidents of drug use and vandalism were much higher.[67] Accordingly, while the homogeneity of the residents in retirement apartments makes strangers more salient, this does not seem to be enough since the newer dorm also had a homogeneous population. It could be that the average criminal is not elderly, making him or her stand out in senior populations; or that seniors are less likely to vandalize, either because of cultural factors related to age or because their residency is less transitory than dormitory students; yet Newman also reasons that social networks defend residents. "Because the elderly are, for the most part, retired and as a result have much free time on their hands, they tend to socialize a lot";[68] they come to look out for one another,

and because "[i]t is quite common for a group to spontaneously set up a table at the entry to their buildings[…], they effectively serve as their own doormen."[69]

However, surveillance does not inevitably translate into intervention. Jacobs, again emphasizing the pre-reflective, writes that without a background awareness of "the almost unconscious reassurance of general street support in upholding civilization," surveillance does little. "Horrifying public crimes can, and do, occur in well-lighted subway stations when no effective eyes are present. They virtually never occur in darkened theaters where many people and eyes are present."[70] Newman identifies two interrelated features that should be present for surveillance to be effective: a sense of proprietorship and community. An observer's willingness to intervene depends on "[t]he extent to which the activity observed is understood to be occurring in an area within the sphere of influence of the observer." It also depends on "[t]he observer's identification with either the victim or the property being vandalized or stolen."[71] Hence the extension of proprietorship is not merely psychological; it involves creating and defining social space and indeed social affordances, fostering a habitual understanding of where one can go, what one can do and when one can intervene. Newman proposes that reducing vehicular traffic through a residential area makes it more pleasant and safer for children, thereby drawing families into sidewalks, while making outsiders more conspicuous and altering the area into a place where residents have proprietorship.[72] Providing spaces for gardening can do the same. The added beauty brings still others out, and the increased aesthetic appeal of the space increases residents' attachment to it and consequently their proprietorship, all regarded as essential by Newman for safe urban living. In more phenomenological language, cultivating a garden and the care that goes into it, seeing it grow—all this may transform a house into a home, a place where people dwell, incorporate themselves and indeed become part of the place that is part of them.

Newman acknowledges the influence of Jacobs' *The Death and Life of Great American Cities*, written roughly 10 years before his major book, and his work and hers agree on a range of points. Yet they also differ markedly. Newman attends almost exclusively to residential design. Jacobs rejects the notion that residential and commercial spheres should be separated. Newman aims to diminish outside human traffic and make strangers feel foreign and increase their conspicuousness to residents. Jacobs insists that neighborhoods can handle heavy flows of strangers without degrading into those anonymous zones described by Newman. In fact, she posits they must do this if they are to be livable, a point that holds even more so in today's increasingly multi-cultural milieus. In short, Newman seems to see cities as places of violence, danger and risk, and accordingly values defensibility above all, thus his emphasis on affordances organized around territoriality. By contrast, Jacobs overwhelmingly celebrates cities as elaborate, often beautiful and nearly always intriguing ballets. She especially values community, diversity and what she would call "safety," as opposed to Newman's more soldierly emphasis on defense, which, according to Joy Knoblauch, essentially replaces the "fortress apartment" and "hard walls and locks" with "a soft bunker, a network of defensible territories."[73] So although Newman's defensible measures did reduce crime in some cases,[74] it was not without social cost. From his standpoint, a neighborhood is in good order when residents recognize the people living on the block, and when, in his words, "strangers to the street are greeted by questioning glances and a cacophony of barking dogs."[75] Jacobs, by contrast, maintains that livable cities must be places where people are comfortable with strangers, and while unambiguous demarcation of public and private areas within neighborhoods is advised, she recommends ambiguous transition zones between

them, stressing the importance of drawing and welcoming people in, adding that crime tends to be worse with hard-bounded borders.

Accordingly, Jacobs does not merely hold that livable cities must be able to handle strangers, but rather that they become more livable by virtue of doing so. Strangers not only have the potential to increase safety by adding their eyes "to the number of effective eyes on the street";[76] they also add vibrancy, richness and aesthetic intrigue. Because of this—and because people like watching other people and are not much inclined to watch an empty street—the presence of people tends to invite more out, consequently increasing safety further, while also making for a more interesting milieu. For this reason, Jacobs sees advantages in interspersing commercial establishments with residential dwellings. Commercial establishments "give people—both residents and strangers—concrete reasons for using the sidewalks on which these enterprises face."[77] "[T]he sight of [these] people attracts still other people"[78] and therewith other observers. If the commercial enterprises vary enough, people may be present at all times. So, for example, while orthodoxy frowns on locating drinking establishments within residential areas, a bar can ensure the presence of people after other businesses have closed and most are in bed.

While the mixing of residential and commercial space is appealing for safety reasons and also to those preferring urban to suburban life, some enterprises interrupt flow and rarely combine well with urban residential space. For example, strip-malls, which cater mostly to the automobile, do little to bring people into the streets. Large malls such as the Eaton's Centre in Toronto may have heavy pedestrian activity around their primary entrances, but areas between entrances are often dead, a situation, however, improved with the 2002 completion of the adjacent Dundas Square. Size is also a problem when it comes to organization of streets into blocks. Jacobs demonstrates that blocks arranged in long strips will concentrate traffic along certain routes, leaving other routes relatively bereft of people and the safety they offer. Lightly travelled routes are likely to have less business since it is typically difficult to thrive in low traffic areas. With fewer businesses, less people are drawn in, and so the cycle continues. "*Most blocks*," writes Jacobs, "*must be short; that is, streets and opportunities to turn must be frequent*."[79] Another way to bring people out onto the sidewalks, as unnecessary as it might seem to say it, is to not actively discourage them. Whyte remarks that "[i]t is often assumed that children play in the street because they lack playground space. But many children play in the streets because they like to."[80] If on the street, either in the company of a caregiver or with a caregiver keeping an eye on them from an apartment window or balcony, the streets have many more eyes on them and may actually be safer than parks, which sometimes lack natural surveillance. So in much the same way that the Kaplans advance an aesthetics of uncertainty, here an aesthetics of choice, which implies uncertainty, is at play, whether through the variety of commercial establishments and streets to walk on, or the power to use sidewalks as playgrounds. This translates into more interesting, engaging and fun environments, which must surely be considered in urban aesthetics.

This openness of the street also cultivates safety, albeit in predominantly gentle ways that rely less on police-like monitoring and more on people being out enjoying themselves. Here people are mostly not even aware they are monitoring, and this because they are not in fact doing so unless something goes wrong. The situation can accordingly be characterized along Heideggerian lines that suggest that things primarily become objects of contemplation and explicit notice when they break down.[81] Newman's model, by contrast, is based on

heightening sensitivity to the fact—whether alleged or genuine—that things are bound to go wrong. As seen, therefore, it limits ways in and out of areas, reducing traffic and making outsiders feel conspicuous, in contrast to Jacobs' approach, which augments the number of paths,[82] intensifies pedestrian traffic and makes strangers feel welcome. As she sums up: "The safety of the street works best, most casually, and with *least frequent taint of hostility or suspicion* precisely where people are using and most enjoying the city streets voluntarily and are *least conscious* ... that they are policing,"[83] in other words, when they do so pre-reflectively and only become aware they are doing so when a problem arises.

Though originally focused on information systems and human-computer interfaces, Value Sensitive Design researchers have begun examining urban settings and architecture, with at least one researcher, van den Hoven, specifically discussing Newman and Jacobs. He states that "[a]rchitects cannot but start from a social and moral requirement of well-being of future users," and rightly adds that well-being can have many different meanings,[84] and goes on to elaborate what the concept entails for Newman, Jacobs and others, listing a good number of the values just discussed. Yet surprisingly, his analysis lacks significant attention to implicit, largely unconscious background values or biases leading theorists to promote specific values such as defensibility, though he does show awareness of the issue, especially by virtue of the scholars he cites.

Take Newman as an example. Knoblauch observes that he was essentially an entrepreneur when producing his landmark work.[85] As with researchers such as Paul Ekman, whose questionable conclusions on reading facial expressions[86] have been lapped up by policing and security communities and propagated on television shows, Newman's work was made for a lucrative market, in fact, more or less the same one. It presupposes Hobbesian and Darwinian notions that life is predominantly a struggle not to be attacked and to defend one's territory. According to Knoblauch, moreover, it takes for granted classical liberal principles, naturalizing the concept of private property and the tenet, as Newman puts it, that "historically the intactness of the family living unit and the territorial zone of the cluster of family units has always been given architectural expression."[87] The publication of Newman's major works also coincided with a time, like today, when politicians capitalized on emphasizing crime,[88] and Newman prospered from this.

Knoblauch and others such as Neal Katyal and Shah and Kesan, taking a lead from Michel Foucault,[89] accordingly maintain that Newman's vision recalls "Jeremy Bentham's aim for the panopticon" insofar as it endeavors to use the environment as a "means to produce peaceful, productive behaviour, avoiding the costs, abuses, and rebellions that come with overt policing."[90] Although this is not a repudiation of Newman's empirical findings, which were carefully arrived at; and while accordingly not necessarily grounds for a wholesale rejection of his solutions, which sometimes worked and arguably remain more humane and broadly realizable than heavily compounded neighborhoods, it does suggest circumspection. Indeed, it suggests caution with any approach insofar as all design inevitably embodies personal, economic and cultural values of decision-makers, planners and architects—values that are often held nearly unconsciously. Langdon Winner sums up the situation, writing that

> many of the most important examples of technologies that have political consequences are those that transcend the simple categories of "intended" and "unintended" altogether. These are instances in which the very process of technical development is so thoroughly biased in a particular direction that it regularly produces results counted as wonderful breakthroughs by

> some social interests and crushing setbacks by others. In such cases it is neither correct nor insightful to say, "Someone intended to do somebody else harm." Rather, one must say that the technological deck has been stacked long in advance to favor certain social interests, and that some people were bound to receive a better hand than others.[91]

Along with other human artifacts, urban design and architecture are not neutral, but manifest values that we barely notice because they are ingrained in our worlds and cultural habits. This invariably has the effect of elevating particular social groups and values above others.[92]

Leaving aside objections related to social control, entrepreneurial ambition, political opportunism or the fact that design implicitly and sometimes explicitly favors select groups, Whyte offers an additional warning: that "[p]laces designed with distrust [often] get what they [are] looking for."[93] He says he only ever observed one park with serious problems, and saw none in places well used. The exception was a park in which drug dealers began working. To discourage this, half the benches were removed and later steel-bar fences added. This drove away ordinary users, and therewith left the park more open to dealers and customers.[94] Jacobs elaborates on other costs of excessively defensible space, comparing it to the system of turfs enforced by city gangs. With sharply defined perimeters, privately controlled grounds and streets, what are advertised as "islands within the city" can also function to demarcate turf and fence strangers out. She sums up by quoting a letter printed in the *New York Post* in 1959, which remains strikingly relevant:

> The other day for the first time my pride at being a resident of Stuyvesant Town and New York City was replaced by indignation and shame. I noticed two boys about 12 years old sitting on a Stuyvesant Town bench. They were deep in conversation, quiet, well-behaved—and Puerto Rican. Suddenly two Stuyvesant Town guards were approaching—one from the north and one from the south. The one signaled the other by pointing at the two boys. One went up to the boys and after several words, quietly spoken on both sides, the boys rose and left. They tried to look unconcerned... How can we expect people to have any dignity if we rip it from them even before they reach adulthood? How really poor are we of Stuyvesant Town and of New York City, too, that we can't share a bench with two boys.[95]

Aside from this moral shortcoming, places designed for mistrust are seldom appealing on an aesthetic or social level, especially if you are the subject of mistrust. This is something I often observe in Egypt where neighborhood compounds are the norm for the affluent, where security guards vet who gains entry into shopping malls, universities and other areas on the basis of race, perceived economic status and sometimes age. Problems extend beyond social discrimination, however. Both Jacobs and Newman stress the need to demarcate public from private. Yet for such a demarcation to occur, there must first be *both* public and private spheres of life, but disproportionate emphasis on private realms largely obliterates public spheres and therewith the possibility of a demarcation. As this distinction disintegrates, so too do the largely unconscious networks of mutual support. After all, while people care about what occurs on sidewalks outside their doors, an area outside a compound wall can be almost non-existent to awareness, pre-reflective or otherwise. A degree of ownership is inescapable and likely advised, but a good portion of it needs to be public if broadly liveable spaces are the aim.

IV. Thriving with biases

I will conclude by discussing some lessons and limitations. One particularly salient lesson is that preference and function can be counterintuitive. It is not uncommon to observe

stunningly beautiful areas that are not especially popular, as in the case of Strong Pond at Toronto's York University or the lovely gardens at the American University in Cairo that fail to attract because they are outside major pedestrian areas. This reminds us that aesthetics, especially in urban spheres, is more complicated than sheer beauty or ugliness. Aesthetics operates on a subtler, more implicit but also pervasive level, especially if we take seriously the Kaplans' position that aesthetic perception is an everyday way we negotiate and handle environments.

A second lesson that has reoccurred throughout is that cities are vastly tangled environments—pulsating, living ecologies with many scales, interconnections and "ever-increasing circles of complexity,"[96] to borrow a phrase from Charles Darwin. Because of this complexity, seemingly small decisions often have cascading effects and unintended consequences. Virtually all urban theorists ought to be sensitive to this issue by virtue of working in what broadly may be counted as environmental studies. That said, research progresses and avoids falling into incoherence by looking at a relatively small number of things in isolation. By the very nature of what academic research is, therefore, it risks moving away from approaches suitable to the investigation of cities. Although this article has offered only a sliver of what could be examined, I have tried to keep in mind that cities are physical, social and political animals, and considered scales ranging from immediate pre-reflective behavior in parks to the history that invested certain values and social affordances in urban structures. However, I have still ignored more than I have covered, and accordingly neglected critically important issues.

For instance, whereas the differentiation of a city into neighborhoods has consequences on immediate levels, some of which I addressed, it also has broad political ramifications, which I largely ignored. Jacobs identifies three scales of neighborhood and observes that each "has different functions but the three supplement each other in a complex fashion."[97] Public money flows from the city as a whole, and is directed in various ways from the governing administration, which makes decisions for the entirety. At the other end of the spectrum are street neighborhoods, which are also political entities, and in the middle are districts of about 100,000 people or so. If residents in a neighborhood believe a proposed project is undesirable, it is often they who initially challenge it, whether through petitions or local meetings. Jacobs recollects residents objecting to a proposal to remove three meters of sidewalk along a Greenwich Village street. The initial impetus against this came from the affected neighborhood. Though the protest began there, it was ultimately successful through the power of district-wide organizations, without which it likely would have had little effect.[98] For academic purposes, researchers might ignore the broader political inter-workings of these various scales of neighborhood, as indeed I have done. Yet when it comes to the concrete health of a city, this is nearsighted. If, for example, design were not to accommodate local political functioning, and if developers were consequently to gain more freedom to erect large shopping centers, then the very networks of unconscious support this paper advocates would be threatened.

A third lesson is that values, which might also be called biases, are inevitable. Newman and Jacobs had theirs. I have mine. However, biases are not always bad. A hypothesis, which narrows focus, is a bias; so too is a method, which in all cases excludes certain data ahead of time and organizes what remains according to its parameters, as when human behaviors are mapped onto discrete scales in order to accommodate experimental methods in psychology. So while typically frowned upon, we cannot conduct research without biases.

Indeed, we cannot register anything without them. Even the human hand is a kind of bias that shapes much of our worldly experience, and technologies ranging from computers and smartphones to cars, doorknobs, chainsaws, elevators, pencils and books are thankfully designed to accommodate this bias. The theory of affordances in fact underscores the unavoidability of biases insofar as it holds that we see things according to what we—with our particular bodies, capacities and needs—can do. For such reasons, Gibson explains—in a line of analysis so close to Dewey and Merleau-Ponty that it could have been lifted—that "an affordance is neither an objective property nor a subjective property; or it is both if you like." It "cuts across the dichotomy of subjective–objective." Gibson continues: "An affordance points both ways, to the environment and to the observer."[99] By pointing to observers, who must register things in terms of what they can do within a given setting, affordances emphasize perception as non-detached, so that, as Dewey puts it, "perception and *its* object are built up and completed in one and the same continuing operation."[100] This suggests perception is fruitfully biased, not in the sense of being in the head, but in the sense of being perspectival. We see things from our perspectives, that is, in terms of what we can do, which is inextricably linked and co-determined by what the environment enables us to do, so that our perspectives are as much thrust upon us by the environment as the reverse.

To develop this into a line of argument more relevant to this article, notice that possibilities that are of extreme disinterest to us are not likely to show up as strong affordances insofar as we do not see them as options to be taken or avoided in the first place. Approaching this view, James stresses not only that we see things in terms of interests, but also that in the absence of them we would not see much at all since experience would degrade into chaos.[101] If we did not have interests narrowing our attention during a lecture, and attended equally to every person, piece of clothing, fleck of dust, snatch of mud, piece of lint, whisper, background hum, rain pattering the window, fingers tapping keyboards, the hardness of our chair and scent of perfume or coffee in the room, in short, all perceptible aspects in the lecture hall, we would not take in what the speaker is saying, nor indeed have anything qualifying as coherent experience.[102] For such reasons, James stresses the importance of interests. In so doing, he also emphasizes a kind of perspectival pluralism, which translates also to value pluralism. In one well-known example, he writes: "One man conceives [oil] as a combustible, another as a lubricator," and still another "as a darkener of wood."[103] For different people, the substance is valued and consequently noted for producing different effects. James accordingly maintains that an object's "essence"—that is, the key set of features that make something what it is—"varies with the end we have in view."[104] Hence essence is nothing more than those key properties that are

> …so *important for my interests* that in comparison with [them] I may neglect the rest. … The properties which are important vary from man to man and from hour to hour. … But many objects of daily use—as paper, ink, butter, horse-car—have properties of such constant unwavering importance, and have such stereotyped names, that we end by [erroneously] believing that to conceive them in those ways is to conceive them in the only true way. Those are no truer ways of conceiving them than any others; they are only more important ways, more frequently serviceable ways.[105]

This has some fairly obvious implications for the account delivered in this article. From this point of view we can see that some values—for instance, safety—are fairly constant across time and place and to that extent, essential. Others, such as diversity, vary with historical and cultural context, and others still with the individual. Thus while there are few instances

when planners will want to ignore safety, they will want to keep design open enough to accommodate significant variation of values in most cases if the aim is broadly liveable cities. This means incorporating choice into design.

On a very local and immediate level, choice is important from the standpoint of comfort. At different times, to consider a trivial case in point, park users may want to sit "up front, in back, to the side, in the sun, in the shade, in groups, off alone."[106] Women and men are often partial to different seating arrangements.[107] People like flexibility, and Whyte observed that a person will "often move a chair a few inches this way and that before sitting in it, with the chair ending up about where it was in the first place."[108] Though insignificant in terms of physical position, these movements convey a message: "Sorry about the closeness, but there's no room elsewhere, and I am going to respect your privacy, as you will mine."[109] To increase choice, flexible, multi-use design-features are advisable. Fences and low walls can be used to sit on, hang merchandise upon, or as backdrops for vending booths.[110] Ledges can double as seats and thus increase the number of possible seating arrangements. People will sometimes sit on both sides of a ledge if it is wide enough to accommodate two backsides, and thus "for a few extra inches, builders can double the amount of sitting space."[111] People may not use all the space, but this is not the main point. "The benefit of the extra space is social comfort—more room for groups and individuals to sort themselves out," and above all, "more choices and more perception of choices."[112]

Leanne Rivlin, drawing on Gibson, states that "[a]ffordances enable the discovery of possibilities, an important dimension of public space that helps to satisfy people's needs."[113] She stresses freedom of choice in public life, which she says "is at the core of people's ability to discover possibilities in the environment and thereby to make use of found spaces."[114] This includes not just freedom to act, but to define a space, so that a fruit vendor or performer can become a locus that gathers people, making the place what it is, much in ways that Heidegger discusses when he talks about jugs and bridges doing the same.[115] Squares, intersections, monuments, community gardens cultivated in abandoned lots similarly define areas geographically, and the people drawn in contribute to the uniqueness of the place and add to what it is.[116]

The demand for freedom of use has always been pressing insofar as individuals have always valued different things, with even the same individuals having different values at different times of the day, days of the week, periods of their lives, or depending on the company they are with. The demand has arguably become more pressing as cities have become increasingly multicultural and multi-social. It is unfortunate, then, as Nisha Fernando observes, that choice is increasingly threatened "through the privatization of urban public spaces, including sidewalks."[117] She notes that people sometimes have visual access to public spaces, yet without physical admittance because of fences and such obstacles. Perhaps more troubling is the extent to which control is mandated through bylaws and other regulations. A case in point is Toronto, one of the most multicultural and liberal cities in the world, yet, like so many other places in the West, highly regulated, so that it was considered "food history" when, in 2011, a vendor won the right to sell fare other than hotdogs and sausages;[118] or when in 2012, vendors generally were granted the right to do the same;[119] or where buskers must pay, apply, be photographed and follow a list of very specific rules in order to perform.[120]

Indeed, while countries such as Myanmar and Egypt are oppressed when it comes to expression of political and religious ideologies, they have greater liberties than Western

regions when it comes to many immediate personal choices, such as management of time and small economies. There food vendors more or less sell what they want where they want to sell it without or regardless of permit requirements; and while many practices would send Western health inspectors screaming, consumers can use their judgment and take some responsibility for what they put in their mouths. The fact is, moreover, that I have never gotten sick from street food in either country despite an extensive visit to one and residing in the other for roughly six years, and despite not being particularly discriminating about what goes in my mouth. Although it is true that these countries would benefit from adopting certain Western practices, the reverse also holds. This is perhaps one more value—openness to other cultures and to the fact that we are not always right—that might fruitfully prosper in design and policy, which are inextricably intertwined.

Notes

1. I am grateful to the anonymous reviewers for their constructive criticisms.
2. J. Schulkin, *Bodily Sensibility: Intelligent Action*, 57.
3. R. Kaplan and S. Kaplan, *The Experience of Nature: A Psychological Perspective*, 37.
4. See R. A. Caro, *The Power Broker: Robert Moses and the Fall of New York*; L. Winner, "Do Artifacts have Politics?"
5. For example, J. Jacobs. *The Death and Life of Great American Cities*, 118–125; B. Yirdirim, "Production of a Public Space: Taksim Square."
6. P. M. Merikle, "Perception Without Awareness: Critical Issues."
7. G. A. Miller, "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information."
8. N. Cowan, "The Magic Number 4 in Short-Term Memory: A Reconsideration of Mental Storage Capacity."
9. S. Kaplan, "Where Cognition and Affect Meet: A Theoretical Analysis of Preference."
10. P. Lewicki, T. Hill and M. Czyzewska, "Nonconscious Acquisition of Information."
11. For example, Dienes and J. Perner, "A Theory of Implicit and Explicit Knowledge"; A. Dietrich, "Neurocognitive Mechanisms Underlying the Experience of Flow"; S. Epstein, "Integration of the Cognitive and Psychodynamic Unconscious."
12. A. Dietrich, "Neurocognitive Mechanisms," 752.
13. Epstein, "Integration of the Cognitive and Psychodynamic Unconscious."
14. E. Husserl, "The Mathematization of Nature", 353.
15. A. Dietrich, "Neurocognitive Mechanisms," 749.
16. See A. Chemero, *Radical Embodied Cognitive Science*, 27; J. Long, *Darwin's Devices: What Evolving Robots can Teach Us about the History of Life and the Future of Technology*, Ch. 5.
17. A. Clark, *Supersizing the Mind: Embodiment, Action and Cognitive Extension*, 14; also see A. Noë, *Out of Our Heads: Why You Are not Your Brain, and other Lessons from the Biology of Consciousness*; L. Barrett, *Beyond the Brain: How Body and Environment Shape Animal and Human Minds*.
18. M. Merleau-Ponty, *Phenomenolgy of Perception*, 368.
19. *Ibid.*, 159.
20. For review, see V. Kestenbaum, *The Phenomenological Sense of John Dewey: Habit and Meaning*; M. Crippen, "Body Phenomenology, Somaesthetics and Nietzschean Themes in Medieval Art"; M. Crippen, "Dewey, Enactivism and Greek Thought."
21. J. Dewey, "Affective Thought", 121; also see Merleau-Ponty, *Phenomenology of Perception*, Part 1, Ch. 1.
22. M. Heidegger, *Being and Time.*
23. D. Seamon, "The Phenomenological Contribution to Environmental Psychology," 128; also see D. Seamon, "Lived Bodies, Place, and Phenomenology: Implications for Human Rights and Environmental Justice," 151–153; Merleau-Ponty, *Phenomenology of Perception*, 167–168.

24. See Merleau-Ponty, *Phenomenology of Perception,* 160–161.
25. See Heidegger, *Being and Time*, esp. §17, 102–107 (77–83).
26. M. Johnson, "Architecture and the Embodied Mind," 76–78.
27. W. Whyte, *The Social Life of Small Urban Spaces*, 19.
28. For review, see A. Chemero and S. Käufer, "Pragmatism, Phenomenology, and Extended Cognition"; also see H. Heft, *Ecological Psychology in Context: James Gibson, Roger Barker, and the Legacy of William James' Radical Empiricism*; E. Reed, *James J. Gibson and the Psychology of Perception*.
29. J. J. Gibson, *The Ecological Approach to Visual Perceptio*n, esp. 127.
30. Kaplan and Kaplan, *Experience of Nature*, 37.
31. S. Kaplan, "Aesthetics, Affect and Cognition: Environmental Preference from an Evolutionary Perspective."
32. *Ibid*., 26.
33. Kaplan and Kaplan, *The Experience of Nature*, 5.
34. *Ibid*., 7.
35. W. Weaver, "Recent Contributions to the Mathematical Theory of Communication," 9–10.
36. S. Kaplan, R. Kaplan, R. and J. S. Wendt, "Rated Preference and Complexity for Natural and Urban Visual Material," 354–356.
37. S. Kaplan "Perception and Landscape: Conceptions and Misconceptions," 50.
38. R. Kaplan and S. Kaplan, *The Experience of Nature,* 58; emphasis added.
39. *Ibid*., 68.
40. Whyte, *Social Life*, 21; see also K. A. Franck and Q. Stevens, "Tying Down Loose Space"; L. G. Rivlin, "Found Spaces: Freedom of Choice in Public Life."
41. Jacobs, *Death and Life*, 266.
42. *Ibid*., 267; quoted from K. Lynch, *The Image of the City*, 100.
43. A. Berleant, "Aesthetic Perception in Environmental Design," 94–95.
44. *Ibid*., 95.
45. Whyte, *Social Life*, 56.
46. *Ibid*., 57.
47. M. Johnson, "The Embodied Meaning of Architecture," 31.
48. Whyte, *Social Life*, 58.
49. Jacobs, *Death and Life*, 109.
50. Jacobs, *Death and Life*, 50–51.
51. *Ibid*., 51.
52. Seamon, "The Phenomenological Contribution," 136; emphasis added.
53. Jacobs, *Death and Life*, 56; quoted in Seamon, "The Phenomenological Contribution," 136.
54. Chemero and Käufer, "Pragmatism, Phenomenology, and Extended Cognition," 58–62.
55. B. Friedman, P. Khan and A. Borning, "Value Sensitive Design and Information Systems," 69.
56. J. Jeroen van den Hoven, "Architecture and Value-Sensitive Design," 136.
57. R. Shah and J. Kesan, "How Architecture Regulates," 351.
58. E. N. Bacon, *Design of Cities*, 44; also see van den Hoven, "Architecture and Value-Sensitive Design," 139.
59. O. Newman, *Defensible Space: Crime Prevention through Urban Design,* 3.
60. For example, J. Knoblauch, "The Economy of Fear: Oscar Newman Launches Crime Prevention through Urban Design (1969–197x)."
61. For example, without offering a wholesale endorsement, Neal Katyal discusses merits in Newman's views. See N. Katyal, "Architecture as Crime Control."
62. J. Knoblauch, "The Economy of Fear," 348.
63. Newman, *Defensible Space*, 56.
64. *Ibid*., 2–3.
65. *Ibid*., 27.
66. *Ibid*., 194.
67. *Ibid*., 75.
68. *Ibid*., 194.

69. *Ibid*., 194.
70. Jacobs, *Death and Life*, 42.
71. Newman, *Defensible Space*, 79.
72. *Ibid*., 60.
73. Knoblauch, "The Economy of Fear," 337.
74. See E. Cose, "Drawing up Safer Cities."
75. Newman, *Defensible Space*, 60.
76. Jacobs, *Death and Life*, 35.
77. *Ibid*., 36.
78. *Ibid*., 37.
79. *Ibid*., 178.
80. Whyte, *Social Life*, 10; also see Jacobs, *Death and Life*, 55.
81. Heidegger, *Being and Time*, esp. §17, 102–107 (77–83).
82. Jacobs, *Death and Life*, 180.
83. *Ibid*., 36; emphasis added.
84. van den Hoven, "Architecture and Value-Sensitive Design," 140.
85. Knoblauch, "The Economy of Fear," 341.
86. James Russell and colleagues published numerous empirically based studies casting doubts on Ekman's conclusions. See, for example, J. Russell, "Is there Universal Recognition of Emotion from Facial Expression? A Review of Cross-Cultural Studies."
87. Newman, Defensible Space, 51; quoted in Knoblauch, "The Economy of Fear," 343.
88. Knoblauch, "The Economy of Fear," 347–349.
89. See M. Foucault, *Discipline and Punish: The Birth of the Prison*, esp. 195–228.
90. Knoblauch, "The Economy of Fear," 345; also see Katyal, "Architecture as Crime Control," 1,044-1,045, 1,131-1,133; Shah and Kesan, "How Architecture Regulates," 353–354.
91. Winner, "Do Artifacts have Politics?", 125–126.
92. Shah and Kesan, Shah and Kesan, "How Architecture Regulates," 355.
93. Whyte, *Social Life*, 61; for broader political examples of this point, see M. Crippen, "Egypt and the Middle East: Democracy, Anti-Democracy and Pragmatic Faith," esp. 297–302.
94. *Ibid*., 63.
95. Jacobs, *Death and Life*, 49.
96. C. Darwin, *The Origin of Species: By Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, 57.
97. *Ibid*., 118.
98. *Ibid*., 125.
99. Gibson, *The Ecological Approach*,129.
100. J. Dewey, *Art as Experience*, 177.
101. James makes this point in numerous writings. See, for example, W. James, *The Principles of Psychology,* vol. I, Ch. 11; for a brief accessible review, see M. Crippen, "William James on Belief: Turning Darwinism against Empiricistic Skepticism," esp. 478–481 and M. Crippen, "William James and his Darwinian defense of freewill," esp. 71–74.
102. For examples of how interests literally change the perceptual field and our conception of nature, see M. Crippen, "Pictures, Experiential Learning and Phenomenology," esp. 87–89.
103. W. James, "The Sentiment of Rationality," 952.
104. *Ibid*., 952.
105. W. James, *The Principles of Psychology,* vol. II, 335–336.
106. Whyte, *Social Life*, 28.
107. *Ibid*., 18.
108. *Ibid*., 35.
109. *Ibid*., 35.
110. Rivlin, "Found Spaces," 41.
111. Whyte, *Social Space*, 31.
112. *Ibid*., 32.
113. Rivlin, "Found Spaces," 40.

114. *Ibid*., 40.
115. See M. Heidegger, "Building, Dwelling, Thinking"; M. Heidegger, *The Thing*.
116. Rivlin, "Found Spaces," 41–45.
117. N. Fernando, "Open-Ended Space: Urban Streets in Different Cultural Contexts," 70.
118. J. Bain, "Street Food Vendor Expands her Offerings."
119. K. Donkin, "Toronto's Hot Dog Carts Allowed to Expand Menus."
120. See city of Toronto webpage: Buskers, performers and sidewalk (chalk) artists, accessed 30 July 2016.

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