Discreteness, or Towards a Flat Ontology of Architecture

If objects are viewed as nothing but blank screens onto which linguistic fantasies are projected, we miss the tension in objects between their identity as one thing and their swirling manifold of spots and stripes where the connaisseur finds points of entry.

Graham Harman

The thing’s hollow—it goes on forever—and oh my God—it’s full of stars!
Arthur C. Clarke

Consider the orca.

A biologist might tell you that orcas are, like any other creature, the product of DNA mutation coupled with natural selection, as if that explained everything about the evocative thing right there in front of our eyes. In that worldview, the orca is simultaneously reduced to an outcome of interactions of atomic units and of enormous ecological systems. In a theoretical and popular world obsessed with networks, flows and processes, it seems like the orca must also be a network or a flow or a process; to a hammer everything looks like a nail. But this denies the specificity and discreteness of the orca: the depth of its slick black rubbery skin, the alien figuring of its white patches, its toy-like expression seeming to anoint the orca by attempting to justify or generalize it, why not instead embrace its specificity as an object, with all of its mysterious, irreducible character and inclinations?

In the architecture of the early 1990s, a revolution in digital design methods, the birth of the internet and the strong impact of Gilles Deleuze and Felix Guattari’s A Thousand Plateaus prompted an urge to diffuses things into constellations of forces and relations. As read and absorbed by architecture, concepts of folding, becoming and the body without organs transformed all things solid and singular into lines of flight, matters and speeds. At the time, this framework was an attractive alternative to the waning critical project of the 1980s, with its circular games of meaning and irony. This was a clear move away from the text as the center of discourse towards formal and material concerns. Sanford Kwinter’s discussion of Conrad Waddington’s “epigenetic landscape,” in which a warped surface (representing DNA expression) is pictured as the extensive result of a network of intensive puppetry wires controlling it from beneath, set the stage for thinking about architecture in terms of sets of contingencies, as something in formation. In parallel, Jeffrey Kipnis began to promote qualities as a way to engage architecture immediately, without semiotic reading, as a question of form and mood.

These two threads, one towards the intensive world and formation, and one towards the extensive world and new subjectivity, continue to support a rich dialogue in architecture today, twenty years later. Recently, however, this discussion has become part radicalized by voices calling for total coherence between nature, city, infrastructure and building, versus others calling to recoup disciplinary expertise and engagement of the specifics of the architectural object. This tension needs to exist in parallel universes: a world of surfaces, which goes on forever in all directions like a sheet, and a world of discrete chunks, consisting of things that can be held up and closely examined like diamonds. In the former, difference is drawn out from a neutral state or expressed as continuous variation, while in the latter, there is no neutral condition, and difference exists within the things themselves. Coherence is not achieved through literal closure, but rather by way of discrete things acting upon one another. The profound difference in ethos between these two contemporary positions underlies a long thread of debate in architecture, articulated for instance by Stan Allen favoring field over object in “From Object to Field” (1997), Robert Somol favoring shape over form in “12 Reasons to get back into shape” (2004) and recently by Mario Carpo favoring voxel over spline in "Breaking the Curve." At stake here is not only architectural aesthetics and what resonates at a particular moment but also a fundamental dispute about how things and groups of things exist in the world.

What is a Flat Ontology?

One of the most important advances in the discourse of parts to wholes in architecture in the last century came through emergence theory, or the idea that the whole qualitatively exceeds the sum of the parts. In that case, architecture could be coherent without recourse to classical composition. Despite often having been diluted by anemic computational exercises or obscured by jargon and scientism in architecture, emergence offers an explanation of how new things become manifest, as whole objects with their own irreducible properties. For instance, water is not made of little waters; water is a whole object with irreducible properties, containing other whole objects (hydrogen and oxygen) with their own irreducible properties. The result is a conceptual surprise: whole things are made of other whole things and not of parts.

Object-oriented philosophy takes this idea one step further, by way of metaphysics. If everything is a whole and not a part of something else, and everything exists equally but differently, then vertical stratification between parts and wholes becomes impossible. In this model, everything exists side by side, like a collection of treasures laid out on a table. The question then becomes: If we agree that things are made out of other things, how can something simultaneously be a component of a thing and be a whole thing? The philosopher Tristan Garcia uses the analogy of a “sack” to address this conundrum. A sack gathers things together into a loosely coherent form without dissolving the things’ discreteness. For architecture, this presents unfamiliar ways of thinking about relations between containers and the things they contain. Instead of one of each, this theory suggests multiple outsides and inside, and an infinite deferral of interiority, like drilling sideways through a set of Russian dolls. Further, it substitutes the idea of “components” with supercomponents, capturing the indeterminacy of being simultaneously “above” (super-) and “below” (component) in a relational structure, essentially flattening out any hierarchy. Rather than wholes with constituent parts, buildings become objects, wrapped in objects, wrapped in objects and so on. In that case, architecture

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3. Lee Bollard, The Democracy of Objects (Ann Arbor: Open Humanities Press, 2011). He notes that “all objects, as Ian Biggar has so nicely put it, equally exist while they do not exist equally.”
4. Graham Harman, “Object Oriented France: The Philosophy of Tristan Garcia,” Constellation 5.1 (2012): 10. On Tristan Garcia: “Instead, a thing is comparable to a sack that is immaterial and without thickness: it is nothing other than the difference between that which is free and that which the thing is, between content and container.” See also Lee Bollard, “Parts and Wholes: The Strange Meronomy of Object-oriented Ontology” in The Democracy of Objects. Deleuze and Guattari, in a similar way, insisted that “the wolf is also the pack” in Gilles Deleuze and Felix Guattari, “1914: One or Seven Wolves,” in A Thousand Plateaus (Minneapolis: Univ. of Minnesota Press, 1987) 26-38.
5. Graham Harman writes that “we have a universe made up of objects wrapped in objects wrapped in objects.”
becomes an act of staging and characterizing the spaces of these deferrals, as well as characterizing each unique object.

Now, when all architectural "elements"—such as mass, interior, surface articulation and ground—are treated equally but differently, strange and productive architectural consequences arise. Interior objects, as noted above, gain formal independence from the outer mass, potentially pushing into and inflecting it or even transgressing the boundaries of the outer mass to exist on equal terms. Next, mass is no longer contingent upon literal ground. Resisting harmonious alignments with the constructed "essence" of physical context, ground and mass are separated, to be dealt with as equally important but independent architectural problems.

One does not erase or assimilate the other, but the two may anticipate one another. Finally, surface articulation is given its own identifiable objecthood, embedded into the architecture loosely rather than being subsumed. For instance, patches (as in a calico cat), which are distinct figuration and independence from the surface they are on, would be favored over panelization, which is necessarily beholden to underlying surface geometry. This same logic of objects could be applied to any number of other architectural features as well—apertures, construction joints and so on—which have been undermined by a now exhausted will toward smoothness over the last decade.

This is a basis for a flat ontology of architecture.6 Architectural elements are pulled apart and de-stratified so they can be reassembled to produce a refreshing chunkiness and tension. In order to achieve this effect, architectural elements must interact—empathize with one another—rather than remaining fully autonomous. Things can nestle, squash, or envelop other things, as long as they do not fuse together or damage one another. Elements in play must therefore have enough resilience and character that they do not become immediately subsumed by other elements and fall back into a default hierarchy. For this reason, at my office we often work with collections of chunky pseudo-primitives such as crystals or jacks, which have strong silhouettes but no privileged Z-axis orientation. Techniques of development include sacking, stuffing, shrink-wrap, inlay, over-molding, figural slicing and other operations that produce synthetic material effects and celebrate the resilience of whole objects and their interactions. Instead of a milkshake, in which parts dissolve into a homogeneous unity, this is more like a Korean seafood pancake, in which different animals and vegetables are pressed together but kept whole in unexpected arrangements.

**Objects Wrapped in Objects**

Within the framework of a flat ontology, the "sectional object," from Jeffrey Kipnis’s 1993 essay "Towards a New Architecture," becomes newly relevant.7 Particularly after a decade of work focused on the subject of surface and dealing with issues of superficiality, refinement and tessellation, we may now return to concerns of mass and interiority, and importantly, the mystery and surprise of hiding and revealing

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6. The word “element” is problematic here (but difficult to find a substitute for) because it connotes that things can be broken down into substrata or located in a hierarchy. See Gottfried Semper’s The Four Elements of Architecture (1851), which argues that plinth, hearth, roof, and wall constitute all architectural discourse. This problem of language is also why I choose ‘whole-to-whole’ relations and not ‘part-to-part’ relations’ in this discussion of a flat ontology.

7. Manuel De Landa is considered the source of the term “flat ontology” in philosophy. “While an ontology based on relations between general types and particular instances is hierarchical, each level representing a different ontological category (organism, species, general), an approach in terms of intersecting parts and emergent wholes leads to a flat ontology, one made exclusively of unique, singular individuals, differing in spatial-temporal scale but not ontological status.” Manuel De Landa, Intensive Science and Virtual Philosophy (New York: Continuum, 2002), 41.

interior objects. The term “objects wrapped in objects,” borrowed from Graham Harman, is intentionally open-ended in order to include many different models of affiliation including, but not limited to, things that are actually inside of other buildings.  

Three examples of models that push this project forward include the figure in a sack, the implied outer shell and the supercomponent. The figure in a sack is an attempt to create plastic relations between container and contained, in which hints are given as to the contents of the “sack,” but the contents are never revealed in full. Inner objects push out like a fist through a rubber sheet, creating strange formal inflections in the sack, and a strange simultaneity of inner and outer silhouettes. The work of Bart Hess, in which human figures are wrapped in engineered polymers, produces similar effects: sack and figure are independent, but each restrains and affects the other. An interior liner, tucked between and around figures as if blown full of air, can create poché space with which to conceal circulation systems and organize functions in a non-stratified way. The liner also allows for a baroque-like independency of exterior and interior form, where mirrored zones of loose-fitting can create vast and unexpected interstitial spaces. This is the strategy for our design for the National Center for Contemporary Art, Moscow (2013). In this project, objects are never fully visible but their shape is implied; sometimes objects are entirely removed, and their impressions are left on sack and liner as a kind of visual subterfuge.

Where the figure in a sack model has as its precedents Jean Nouvel and Philippe Starck’s unbuilt Tokyo Opera (a container with incongruous figures) and Coop Himmelb(l)au’s UFA Cinema Center (an aquarium of “scattered objects”), the implied outer shell model finds its precedents in Bernard Tschumi’s Le Fresnoy and Le Corbusier’s Heidi Weber Museum. Both of those projects deal with the spatial effects of a partial secondary enclosure, which shrouds but does not completely obscure inner objects. Our design for the Taichung City Cultural Center (2013) was based on two vertical figures, one pushing up and one pushing down into a shroud, creating the effect of three independent objects nesting into one another without fusing. Shaped infill glazing jumps between figure and shroud, creating enclosed but seemingly exterior interstitial spaces.

Finally, the supercomponent model is a variation of the figure in a sack, in which objects are instead pressed into an enclosure from the outside. As if vacuumed together and then released, objects can be nestled into one another, implying a coherent new object without producing a fused monolith. Gaps and other discontinuities resulting from this technique are critical, since they reinforce the supercomponents’ autonomy; supercomponents can be tight-fit, loose-fit and even mis-fit for different effect. By pressing some objects more or less deeply into others, involutions are produced which appear on the interior as inside-out figures. We proposed this model in our Maribor project for the 2012 Venice Biennale, which features deep, inhabitable crevices between form-fit objects.

Hovering and Ground Objects

In the same way that discreteness and affiliation characterizes the relation of inner and outer objects, it also characterizes the relation between building mass and ground. Building mass does not fuse or otherwise disappear into ground, but rather maintains distinction from it. Strategies include hovering, nesting or deferring landing by way of a ground object.
all of which create intensive coherence rather than literal continuity. A good analogy is the Russian Ground-Effect Vehicle from the late 1980s, which flies over water at a height of one meter, producing a tense, magnetic relation between ground and mass. This approach of detaching buildings from the ground is different than lifting up building masses by Le Corbusier, which was based on an idea of allowing landscape to flow underneath. Instead, the goal here is to emphasize and re-invent the break between world and building as well as exterior and interior, two of fundamental architectural problems.

An opposite approach to the ground would be the "landscape-building" from the 1990s, which assumes little distinction between the architecture and the rest of the world, often appearing in lump or hill-like formations. At that time, concepts of "becoming" and "the other," as in Deleuze’s musings on werewolves, often pushed architecture outside of its disciplinary boundaries into the indistinct realms of context and site. Architecture became a surrogate for the ground and, as David Ruy has noted, buildings were often reduced to an "outcome" of real or imagined contextual forces. This derigation of the building object by defining it as a trickle-down effect of context is happily rectified with a flat ontology.

A ground object is the total objectification of the land underneath a building. Ground is re-cast as mass rather than surface. In classical architecture, the pedestal or plinth is extruded from the land, and hence is still a type of surface. In contrast, a strong ground object would be characterized by undercuts to the landscape, would appear dug-up and loose and would empathize actively with the building mass. Like a bird in a nest, where the bird and nest relate but have different characters, the ground object requires some degree of architectural autonomy. This autonomy can be further emphasized by way of trenches, joints, level changes, bridges or other sleights of hand. One recent example of this strategy can be seen in the Perot Museum of Nature and Science by Morphosis, in which

the main building mass nests into a ground object, which itself maintains a clear separation from the land.

Another kind of ground object is a hole. In this case, the ground object is not a mass but an articulated void. This strategy can be seen in both Claude-Nicolas Ledoux’s house of the agricultural guard for Chaux as well as Marcel Breuer’s Whitney Museum. A hole has the benefit of both obscuring the foot of the building on approach, and forcing entry at mid-level. The act of entry becomes a leap from one world into another.

**Tattoo**

As opposed to meshes and panelization systems, which are everywhere, all the time on a building skin, a tattoo is an objectification of surface articulation. Tattoos are not ornament, in the sense that they do no hang off of architecture. They are also distinct from the supergraphics of Venturi, which float on the surface of architecture. Architectural tattoos are instead embedded in the building mass, without losing their elemental autonomy. They are clicked-in, over-molded onto or pressed into surfaces loosely, as if they might later be removed and examined as independent objects. Like tattoos on the body, architectural tattoos may sometimes track underlying form, but they often deviate from it to become free-form or figural. Instead of being subservient to edges or

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other formal inflections of the building mass, tattoos are patchy and discontinuous. According to Owen Jones, who may have been the first to make an analogy between tattoos and architecture, a tattoo is “an impress or a stamp” that is “derived less from the ‘body’ it covers than from the graphic interests and pictorial imagination of its maker.”

The contemporary tattoo is not a sign, but an autonomous formal system. According to Mark Taylor’s descriptions of “dermographics,” a tattoo “is always duplicitous.” Architectural tattoos inhabit the duplicitous realm between two- and three-dimensionality, sometimes with the effect of flattening; in other instances they create the illusion of depth where there is none. While tattoos may often become associated with tasks such as organizing apertures or joints on a surface, their primary architectural role is to produce mysterious cross-grain formal effects, which can emphasize or obscure the discreteness of the objects into which they are inscribed. This can mean that they feather edges, emphasize silhouettes or transitions, or virtually connect disconnected masses. The tattoos of our NCCA project, for example, sometimes bridge between discrete masses to create the appearance of a larger unified object, but other times create the illusion that the masses are separate when in fact they are not.

Finally, it is important to note that tattoos derive not only from a new formal sensibility, but from the possibilities inherent in composite construction. Suddenly it is possible, and imperative, to rethink what constitutes surface articulation when the age of tectonic articulation based on bricks, sticks and panels is past. In composite monocouque construction, for instance, the site of the joint may no longer be the site of articulation; one may have nothing to do with the other. Joints and seams may be suppressed or emphasized or altogether faked for effect, as in our project for the Taichung City Cultural Center. Also, the sheer number of functional seams may be significantly reduced, pointing to the possibility of buildings made from massive interlocking chunks. As construction is de-coupled from the size of pieces of


16. “Lines on the body are never uncolour but always duplicitous [...drawing opens as much as it closes, to create seams that are as fragile as the bodies they decorate].” Mark Taylor, Atmo (Chicago: University of Chicago Press, 1997), 123.