Bubbles Burst

Architecture's unlikely yet persistent reluctance to engage with issues of context can most notably traced to Le Corbusier's renowned comparison of architecture and the soap-bubble. "This bubble," he famously postulated, "is perfect and harmonious if the breath has been evenly distributed and regulated from the inside." [1]

CAROLINE O'DONNELL
Cornell University

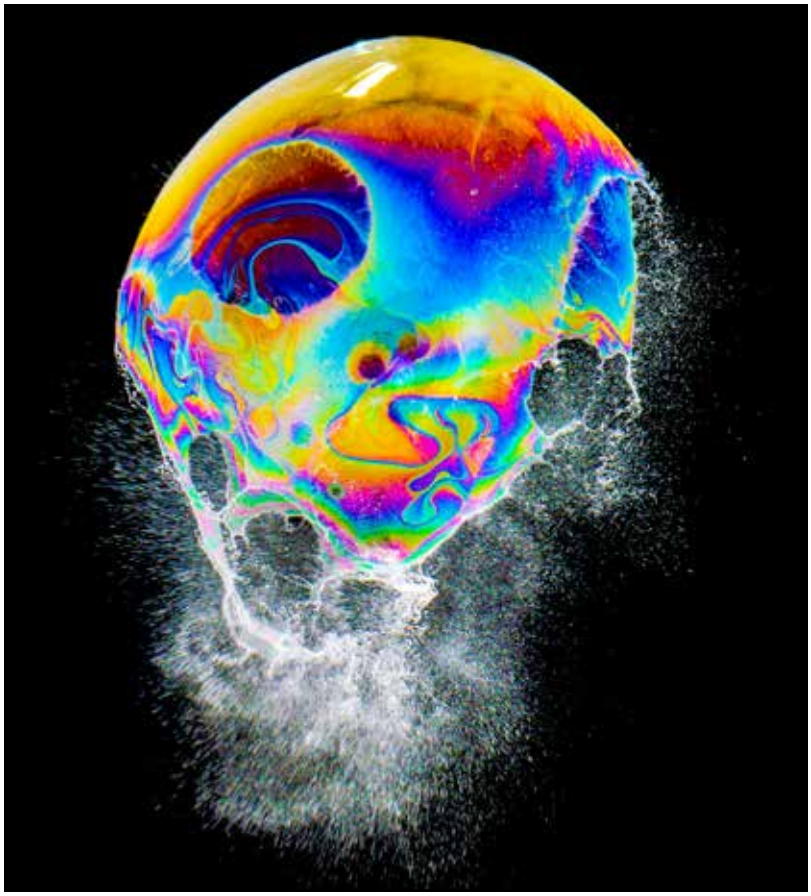
This primacy of the interior was, despite their many differences, shared by modernist architects, amongst whom, as Thomas Schumacher has noted, "few …would have allowed that the outside surface ought to determine the interior distribution."[2]

THE ARCHITECTURAL SOAP BUBBLE

Reiterated in language more appropriate for the 1990s, Rem Koolhaas' provocation to "fuck context" reinvigorated this tendency to favor functional, and thus interior, concerns. Koolhaas' study of architecture's relationship to its urban environment in his oft-quoted essay on Bigness is in many ways a call to understand the building as an isolated object, uninterested in and unfettered by external conditions.[3] Koolhaas argues for an architecture that "through its independence from context….does not take its inspiration from givens too often squeezed for the last drop of meaning" but that "is its own raison d'être."[4]

More recently, Pier Vittorio Aureli has defined this condition as "absolute architecture," arguing that, in fact, "the very condition of architectural form is to separate and be separated."[5] Aureli proceeds to masterfully chart the struggle between the separated form and its history, yet the root of his definition lingers as the foundations of this essay: Why is this separation a given, and why consequently has the relation between architecture and context been so "antagonistic."

The bubble, in fact, has a short life-span. Even when floating in space, it is subject to several external deformative forces: gravity pulls the water molecules to the bottom of the orb, causing unevenness in the membrane; changes in air pressure cause surface deformation. Eventually, the bubble comes into contact with a surface or object and, inevitably, bursts. For the bubble, an encounter with and deformation by the context is inevitable.



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THE ECOLOGICAL BUBBLE

In the same decade that Le Corbusier's original bubble was born, biologist Jakob von Uexküll proposed a different kind of bubble. Standing in a flower-strewn meadow, von Uexküll imagines blowing a soap bubble around each creature, representing the creature's world and its own specific perceptions of that world. "When we ourselves then step into one of these bubbles, the familiar meadow is transformed. Many of its colorful features disappear, others no longer belong together but appear in new relationships. A new world comes into being. Through the bubble we see the world of the burrowing worm, of the butterfly, or of the field mouse; the world as it appears to the animals themselves, not as it appears to us."[6] Von Uexküll names this phenomenal or self-world 'Umwelt.' The organism, having abstracted his particular version of the world is "so wrapped up in its own Umwelt that no other worlds are accessible to it…as though each one were floating in its own particular 'bubble' of reality."[7] This bubble-making gives meaning to reality: a different reality for each animal. Von Uexküll describes, for example, the very particular bubble of a tick which has a limited number of triggers and responses: "Light affects it and it climbs on to the end of a branch. The smell of a mammal affects it and it drops down on to it. The hairs get in its way and it looks for a hairless place to burrow under the skin and drink the warm blood. Blind and deaf, the tick has only three affects in the vast forest, and for the rest of the time may sleep for years awaiting the encounter. What power, nevertheless!"[8]

Von Uexküll's bubble, considered as a model for architecture, could not be more opposed to its Corbusian counterpart. While Le Corbusier's bubble represents an architecture formed from internal forces, von Uexküll's bubble, refers to an (architectural)

Figure 1: "Bursting Bubble": Copyright 2013 William Horton. Used with permission. All rights reserved.

organism which is formed as a response to external forces. Moreover, Le Corbusier's bubble is the object of architecture itself, floating in a void, whereas von Uexküll's bubble reaches out, wraps around and pulls in many extracts of its environment.

Von Uexküll's bubble goes further than Schumacher's proposition of deformation as a response to the visible world. It proposes instead that the world is first pulled inside the bubble, and, moreover, that the meaning of "world" is extracted differently for each organism. The organism, then, evolves in a relationship with its extracted world, formed and materialized by the forces produced by that world.

Despite architecture's willingness to absorb the nomenclature of biology and evolution—terms such as generation, variation, mutation, species, and brood, have snuck into architectural terminology in the last 20 years—the notion of architecture as the bubble in space has persisted, enabled in part by the computer's own white and weatherless non-place. Variations occur and proliferate, but there is no selection procedure to question the relationship of the architectural object to its niche.

Understanding architectural production through Von Uexküll's lens—as a product of external forces—situates architectural thinking in a very different environment from the Corbusian-become-Koolhaasian bubble-model. The architectural organism is considered as part of a large and idiosyncratic network. It is conceived through the eyes of the organism "in" (and not isolated from) the earth.

This significant difference between these two points of view is illustrated by anthropologist Tim Ingold in his essay "Earth, Sky, Wind and Weather."[9] Ingold argues that there is no abstract, planar surface on which to dwell. Instead, the rain softens the ground, the winds erode the land, the forests extend to the sky, so that "to inhabit the land is not, then, to be stranded on a closed surface but to be immersed in the incessant movements of wind and weather, in a zone wherein substances and medium are brought together in the construction of beings that, by way of their activity, participate in stitching the textures of the land."[10]

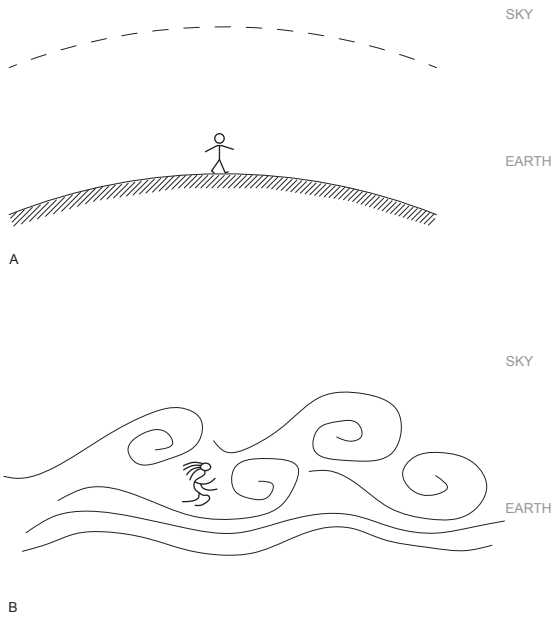


Figure 2: Drawn by CODA after Tim Ingold in "Earth, Sky, Wind and Weather." 2

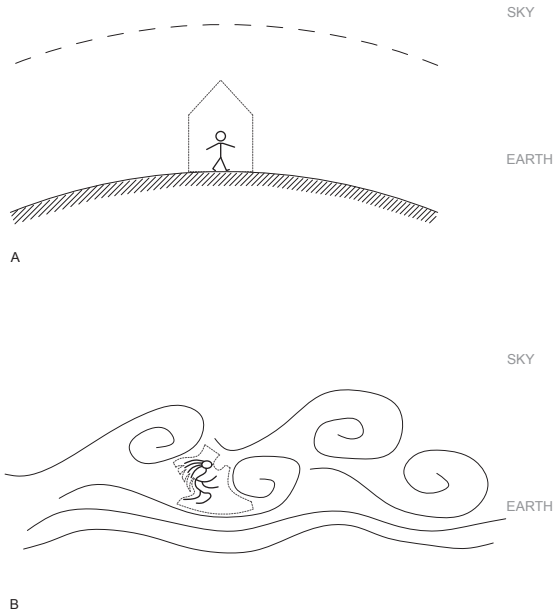
Ingold's diagrams, shows the opposite conditions of living "on" (Diagram A) and "in" (Diagram B). In the first, the human is a neutral generic stick figure. In the second, the "in," the human has acquired a few attributes. First, he has an orientation. He has turned his back to the wind and is facing the gentle lee zone. Second, the figure now has a stance, a gait, with which he is poised on the ground as if ready to act. Thirdly, the figure has acquired hair, perhaps a material necessity of being "in." Finally, nothing about Diagram B is fixed but rather appears in a general state of interrelated flux.

Take the representation of the environment away in Diagram A, and nothing is lacking. Do the same in Diagram B, and the figure continues to suggest something around him. His gait, orientation and material imply something about his context.

If we imagine, as architects may be wont to do, that the human is surrounded by an enclosure, in Diagram A, the enclosure might be a generic house. It addresses the axis sky and earth but, like its enclosed figure, assumes the default symmetricality on the vertical axis. Consider now a house "in" the land. Presumably, it must also change its gait, orientation and materiality. Extrapolated from the diagram into a real environment that includes many complexities besides earth, sky, and wind, one imagines the architecture responding accordingly complexly.

However, in the world today, we find the opposite. We find instead the same generic prototypes irrespective of climate, culture, or material geography. Such conditions have only exponentially worsened since Paul Ricoeur wrote, in 1961, that everywhere in the world one finds: "the same bad movie, the same slot machines, the same plastic or aluminum atrocities, the same twisting of language by propaganda..."[11]

Ironically, in Rem Koolhaas' 2013, announcement of "Fundamentals," the theme for the 2014 Venice Architectural Biennial, Koolhaas laments the sacrifice of national identity to modernity that he himself propagated, and calls for an acknowledgement of the "process of the erasure of national characteristics in favor of the almost universal adoption of a single modern language in a single repertoire of typologies" which he himself promoted. The exhibitions will demonstrate the evolution



3 Figure 3: Drawn by CODA.

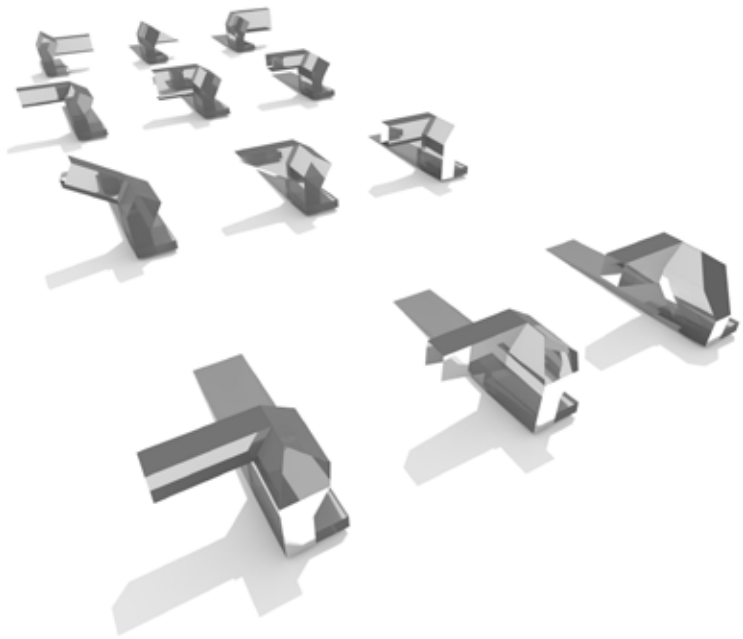
towards the global, but at the same time celebrate "the survival of unique national features and mentalities that continue to exist and flourish even as international collaboration and exchange intensify…"[12]

Koolhaas, it seems, has come full-circle, realizing, at last that, unlike movies and slot machines, however, architecture has a site. Site is, in fact, alongside habitation, architecture's defining characteristic. Movies and slot machines, plastic and aluminum products, a painting, a poem or a piece of music: these can be considered in isolation. Architecture cannot.

Instances of the architect's productive engagement with site date back to the accepted origins of architecture itself. In his chapter, "On Climate as Determining the Style of the House," Vitruvius opens an early discussion of context by comparing climatic variation in the body to architectural variation. The segment begins with the commonsense statement that, "as the position of the heaven with regard to a given tract on the earth leads naturally to different characteristics, owing to the inclination of the circle of the zodiac and the course of the sun, it is obvious that designs for houses ought similarly to conform to the nature of the country and to the diversities of climate." Vitruvius notes that the effects of climate are "not only discernible in nature, but they also are observable in the limbs and bodies of entire races."[13] He proceeds to draw an analogy between buildings and body size, complexion, hair color, vocal pitch, courage, and intelligence at different latitudes. Remarkably, almost 1800 years before Henderson, Lamarck, and eventually Darwin presented the mutual dependence of the environment and biological form in the discipline of evolution, it is to be found in architecture.

However, the hierarchies present in Vitruvius's treatise are revealed when, in the chapter that follows he writes that "symmetry and order are primary, and only after these considerations have been made, should one consider the nature of the site (as well as use and beauty)."[14] This hierarchy remains pervasive in architecture today and has been a trap that has routinely befallen architects. It is precisely this dominance of systems of order and symmetry that limits architecture's ability to respond to its natural environment. Renaissance translations of these ideas, found in the many architectural treatises that proliferated around 1500 years later, tend to be much more pragmatic. For instance, in Alberti's *The Art of Building in Ten Books* he devotes parts three through ten to careful consideration of the details—both in nature and in human cultural life—that constitute the site which he refers to more precisely as locality and area.[15] In so doing, Alberti implores the architect to make both calculations and observations before determining the building's design and orientation. He suggests that elements of the existing context can and perhaps should determine early decisions in the process of architectural production. This predetermined object is a far cry from Vitruvius' unexplored allusion to site-motivated variation in morphology, materiality, and temperament, but understandably so, since such an exploration was made impossible by the predominance of formal rules over morphological responsiveness.

Since its well-grounded yet secondary emphasis in Vitruvius, site-responsiveness has had sporadic resurgence, usually as an anomalous and short-lived personal experiment. The sixteenth century cities of Francesco de Marchi (see "The Deformations of Francesco De Marchi" in *The Cornell Journal of Architecture* issue 9) mark one of these instances in which site once again trumps formal considerations. In a world desirous of geometric order, for reasons both conceptual and pragmatic, de Marchi proposes cities whose form is responsive to the contingencies of its adjacent



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site. In many instances, the natural landforms breach the city walls and go as far as reconfiguring interior layouts.

While rare at its time and place, such domination of site over form resurfaced again, this time in England in the 18th century, due to the departure of the English garden from the French and the rise of the picturesque. Even before this period, English landscape theorists had laid the groundwork for a movement in design that would begin to embrace untamed scenes and conditions. Such license to abandon architectural classical order was given in 1786, by sir Joshua Reynolds: "It may not be amiss for the Architect to take advantage sometimes of that to which I am sure the Painter ought always have his eyes open, I mean the use of accidents, to follow where they may lead, and to improve them rather than to trust a regular plan…Variety and intricacy is a beauty and excellence in every other of the arts which address the imagination; why not in Architecture?"[16]

Having come to a similar conclusion after the collapse of Modernism, the conflict between the architectural bubble and the external world became the subject of much study in the 1960s. And it was at one pole of this debate that Colin Rowe and his students initiated the 'Contextualist' movement. Opposed to the detachment and generalization of Modern architecture, the Contextualists called for "the design of buildings by selectively choosing to relate them to their immediate physical context …"[17] Thomas L. Schumacher, an outspoken critic of Le Corbusier's soap-bubble analogy and others like it for their hand in "many of the problems we face today in the siting of buildings and the design of cities,"[18] proposed instead to work in anticipation of the external distortion of the bubble. In his essay specifically devoted to contextualist values, he writes: "If we relate the urban pressures…to the concept of idealization through programmatic requirements… we can arrive at a logically balanced "contextual" building."[19]

The contextualists' own bubble burst, however, when it became apparent that their architecture was incapable of escaping from a reverence to and continuation of existing conditions. "Deformation" seemed to act only between known ready-made types and even then, appeared to take the form of well-behaved adjustments to

Figure 4: CODA, Urban Punc.

"fit-in" with the existing. Rem Koolhaas' expletive was perhaps a necessary slap in the face to contextualism's moribund trajectory. But in its preference for program, Koolhaas' approach was little more than a return to Le Corbusier's bubble in which the function or program—the needs and desires of the inhabitants—dominated the overall form of the building.

However, it does not follow that the engagement and response to contextual forces must arrive at a banal architecture of retrospective copies. Instead, perhaps, context can be rethought as a field of asymmetrical and sometimes invisible forces. The architecture that is a consequence of context can be rethought; not as merely 'weak form,' but as an offensive reaction that communicates with form; a valid response to channeling and condensing forces. As such, it may be an architecture that twists, shifts, and bends in ways that imply its invisible other: the bubble, burst.

ENDNOTES

1. Le Corbusier, Toward a New Architecture, trans. John Goodman (Getty Publications, Los Angeles, 2007), 216.
2. Thomas L. Schumacher, "The Outside Is the Result of an Inside": Some Sources of One of Modernism's Most Persistent Doctrines, Journal of Architectural Education (1984-) , Vol. 56, No. 1 (Sep., 2002), 22-33.
3. Koolhaas, Rem. "Bigness or the Problem of Large" in S,M,L,XL, (New York: The Monacelli Press, 1995), 502.
4. Ibid, 502-515.
5. Pier Vittorio Aureli, The Possibility of an Absolute Architecture, (MIT Press, Cambridge, MA, 2011) 201, ix.
6. Uexküll, Jacob von. "A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds." In Schiller, Claire H. (ed. and transl.), Instinctive Behavior: The Development of a Modern Concept. (New York: International Universities Press), 5.
7. Tim Ingold, "Point, Line and Counterpoint," in Being Alive, Essays on Movement, Knowledge and Description, Routledge, NY, 2011, 80 referring to J. von Uexküll (see note below).
8. Uexküll, Jacob von. "A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds." In Schiller, Claire H. (ed. and transl.), Instinctive Behavior: The Development of a Modern Concept. (New York: International Universities Press), 5.
9. Tim Ingold, Being Alive: Essays on Movement, Knowledge and Description. (New York:Routledge, 2011).
10. Ibid, 121.
11. Paul Ricoeur, "Universal Civilization and National Cultures" (1961), in History and Truth, trans. Chas. A. Kelbley, Evanston (Northwestern University Press, 1965), 276-7. Quoted at the beginning of Kenneth Frampton, "Towards a Critical Regionalism: Six points for an architecture of resistance", in Anti-Aesthetic. Essays on Postmodern Culture (Seattle: Bay Press, 1983), 16.
12. "Rem Koolhaas Revisits Fundamentals for the 2014 Venice Architecture Biennale," Design Boom, http://www.designboom.com/architecture/rem-koolhaas-revisits-fundamentals-for-the-2014-venice-architecture-biennale/. Accessed April 17, 3013.
13. Vitruvius, "On Climate as Determining the Style of the House," in The Ten Books on Architecture, Transl. Morris Hicky Morgan, (Dover, New York, 1960), 170.
14. Vitruvius, "Symmetry, and Modifications in it to Suit the Site," in The Ten Books on Architecture, Transl. Morris Hicky Morgan, (Dover, New York, 1960), 174.
15. Leon Battista Alberti, On the Art of Building in Ten Books, trans. Joseph Rykwert, Neil Leach, Robert Tavernor, (MIT Press, Cambridge, MA 1988,) 9-24.
16. Sir Joshua Reynolds, Discourses on Art, ed. Robert R Wark (New Haven and London: Published for the Paul Mellon Centre for studies in British Art, London. Limited by Yale University Press, New Haven, Connecticut, 1975), 243.
17. Stuart E. Cohen "Contextualism: From Urbanism to a Theory of Appropriate Form", in Inland Architect, May/June 1987, 68.
18. Thomas L. Schumacher, "Contextualism: Urban Ideals and Deformations," in Theorizing a New Agenda for Architecture, ed. Kate Nesbitt, (Princeton,1996), 3.
19. Ibid, 7.