Architecture's Next Companion Species

"The total conformism of their social practices, with which all human possibilities are identified for all time, has no external limit, but the fear of falling back into a formless animal condition."
—Guy Debord, *Society of the Spectacle*

"Insofar as the animal knows neither beings nor nonbeings, neither open nor closed, it is outside of being; it is outside in an exteriority more external than any open, and inside in an intimacy more internal than any closedness. To let the animal be would then mean; to let it be outside of being."
—Giorgio Agambena, *The Open: Man and Animal*

"Architecture is a human endeavor, but this does not guarantee its 'sympathy' with human life; even less does it guarantee a sympathy with animal life."
—Catherine Ingraham, *Architecture, Animal, Human: The Asymmetrical Condition*

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With several recent publications, it is evident that architectural academia and experimental practice continues to maintain a conviction in the possibilities of an architecture entangled with biology. Twentieth-century Modernism's embrace of the metaphors of nature has transitioned to contemporary fascinations of biomimetics, "living" architectures, and evolutionary computation. Here the animal and plant world provides fodder for architectural design intent shifting—in most cases—from metaphor (and form) to performance. Even very recently, architecture's animal instincts have shifted from bird-like (think: Santiago Calatrava's Milwaukee Art Museum) to bird-responsive (think: Studio Gang's Calumet Environmental Center). But, even among these particular fascinations, we could include, more generally, architectures motivated by sustainability. Though this is not the focus of this short text, sustainability could simply be seen as a

(pragmatic) extension of architecture's evolving biological persuasion. In short, architecture today exhibits—possibly at more than any other time—an overwhelming desire to merge with nature, if not replace it. This text seeks to reveal, within this larger biological tendency, a range of emerging projects that offer an architecture complicit with habitat, and subsequently, with species.

ANIMAL LOGIC

Catherine Ingraham's 2006 publication *Architecture, Animal, Human* presents a unique overview of architecture's fascination with the status of the animal. She cites how, for example, donkeys, birds, and spiders made critical appearances in 20th-century architectural thought to "account for some base, or core, meaning of a living body in space."[1] Ingraham offers this observation as evidence of the tendency of architecture toward animal mimicry, as well as the philosophical Lefebvrian questions of the agency of spatial production (in particular, the spider web and notions of labor). Ingraham's publication was timely and original in its weaving of philosophical and architectural interests in the animal, yet the project remains focused on the lineage of symbolism and metaphorical applications of the animal. This tendency is further supported by the apparent strong interest in biomimicry in architecture within the past decade, instigated outside science and architecture disciplines by "innovation guru" Jane Benyus's immensely successful and accessible publication *Biomimicry: Innovation Inspired by Nature,* published in 1998.

However, the architect today is confronted with far more complicated (and, in many cases, bluntly pragmatic) challenges of architecture-versus-animal friction. These confrontations exist as urbanism (and suburbanism) encroaches further on habitats, and as society increasingly wrestles with anxiety over its own awareness of its destructive habits. We might variously consider, at the urban scale, the notion of "pests" or "intruders" (raccoons, coyotes, squirrels), and at the architectural scale, the notion of infestations (insects, rodents). Of course, if architecture is ever responding to these natures, it is usually in defense—from bug screens to trim details to plumbing or ductwork modifications. Architecture has developed and integrated, through standardization, a range of repellent strategies. Yet other approaches have begun to surface—at the margins of practice and academia—that include an architecture informed by, responsive to, and even accommodating of habitats and particular species.

As momentum to expand architecture's agency as a biological agent continues, an opportunity to reconsider architecture's tendency toward simply emulation of nature reveals itself. And as architecture exhibits potential to accommodate, or host—rather than act as—nature, new possibilities for architecture's understanding of site and exteriority appear. This text seeks to isolate architecture's biological predilection as it relates to potential new readings of posthumanism, mutualism, and companion species theory. These three facets of thought, briefly outlined below, offer immense potential for further architectural investigation.

POSTHUMANISM

In seeking to counter mimicry and metaphor, the emergence of posthumanities is essential. Within the humanities and social sciences, the term posthumanism has emerged within the past decade and has variously offered to signal the rise of biotechnology, cybernetics, and animal studies. Perhaps most useful to the case being made here is its influence within animal studies. Cary Wolfe argues that we are in a posthumanist moment "in which the de-centering of the human by its imbrications in technical, medical, informatic, and economic networks is increasingly impossible to ignore, a historical development that points to the necessity of a new theoretical paradigm."[2] This builds on cross-disciplinary interests in repositioning the status of the animal in a human-centered world. Wolfe, and others, have offered the trailblazing work of Temple Grandin as an example of posthumanist work, which is of architectural significance in this case as well. Grandin identified a unique intersection between animal studies, her educational background, *and* disability studies, her personal predicament. Grandin is autistic and relies primarily on visual rather than verbal information. She developed a sympathy for animals from this limitation, and argued instead that animals possessed "super-human" senses. From this, she developed innovative designs in livestock handling facilities by introducing new standards that incorporated these "super-human" skills while accounting for modified efficiencies and reduced animal stress. Grandin suggested considerable refinements to holding pens and yard for cattle that included turning radius, material selection, and light control.[3] These modifications produced an architecture uniquely driven by and suited to the cattle.

Wolfe additionally offers posthumanism as a disciplinary model that promotes "openness from closure" and which increases "environmental contacts, and in the process produce[s] more environmental complexity for other systems, which in turn challenges other disciplines to change and evolve if they want to remain resonant with their changing environment."[4] This provocation toward disciplinary openness validates further consideration from the perspective of architecture and design.

MUTUALISM

Theoretical ecology employs a phase-plane model to gauge the successful collaboration between species, or mutualism. A phase-plane model indicates comparisons between a species growth and success rates. If there is a match in success rates, there is ground to consider a mutualistic partnership. Often complicit in this perceived success is the state of that environment or habitat. Douglas H Boucher's *Biology of Mutualism* (1985) highlights how these phase-plane models have evolved historically. Mutualistic partnerships suggest three types of beneficial relationships: resource-resource, resource-service, and service-service. Resource indicates that there is a desirable by-product that one species no longer needs that another seeks; and service indicates an act, such as cleaning or protection, that one species provides to another.

Architecture already inadvertently impacts species in a single-directional way. The potential for architecture to acknowledge resource-resource and resource-service relationships—not only to host species but benefit from the presence of species would shift fundamentally how architecture relates to species. A mutualistic architecture would not only mean responsive to biological entities, but would also mean a more calibrated architecture to offer either resource or service in a conscious rather than inadvertent manner.

COMPANION SPECIES

If mutualism offers a biological qualification of survival models, companion species reveals a less-utilitarian service-resource relationship between species. More difficult to qualify, companion species theory is driven socially and emotionally. Donna Haraway's shift from 1980s cyborg theory to a theory of companion species (2003) reflects broader philosophical interests in an alternate (non-technological) posthumanism. In *Companion Species Manifesto: Dogs, People, and Significant Otherness*, Haraway primarily recounts specific narratives of human and animal companionship. She indicates that she is "looking for... the counter-intuitive geometries and incongruent translations necessary in getting on together."[5] It could be argued that a new breed of architecture that is entirely entangled with ecology and habitat might offer a companion to its host territory or environment. As the counterpoint to architecture advanced as an autonomous, visually-driven model is the premise of architecture as a symbiotic process-based agent at once sympathetic and contributive. An architecture invested in companionship with environment is a different kind of architecture. In this architecture, there would be a range of habitat-specific species to address, from microbes and fungi to insects and rodents.

ARCHITECTURE'S ENVIRONMENT-WORLD

One central observation in acknowledging this new animal-responsive proposition for architecture is a shift in conventional notions of site and context. It seems critical to conceive of the place of architecture now as territory and environment, as site and context carry more self-interested notions of architecture's location. This shift allows for an inclusive assessment of architecture's host, and allows for a more expansive scale within which it dwells. Architecture exists within a larger territorial habitat world in which naturecultures—as Haraway merges nature and culture into a single phrase—also reside.

Here it is also useful to note Jacob von Uexkull's notion of "environment-world."[6] Uexkull distinguishes between surroundings and environment through the perceptions of various biological species. He suggests that a species' "surrounding" is all of the elements of its habitat, but that its "environment" is comprised of only the elements in that habitat directly desired or biased by that species. What possibilities appear if architecture could react in a similar way to distinguish its surroundings from its environment in order to bias certain elements, again in a conscious way?

Following a new posthumanist, mutualistic, companion logic, what might an architecture in service of not simply humans, but species, ecologies, and environment-worlds resemble? New thinking on architecture's engagement with the environment is opportune, and a rich counter-theme to overly deterministic sustainability rhetoric. The questions are no longer what architecture does or even how it does it, but—perhaps more importantly—for whom, and with what agency? If architecture spent the twentieth century trying to move, it is possible that architecture will spend the twenty-first century trying to be alive. This is not a move towards robotics, nor biomimetics, but rather a recognition that our environments are, on the one hand, increasingly merging artificial efficiency and natural logic to produce environments that are monitored and controlled, ecologies that are amplified or manufactured, and interior landscapes that are conditioned. On the other hand, the recognition that architecture might engage other species—whether plant or animal—urges it to expand its performance, be programmatically and temporally adaptable and able to negotiate contingencies. What are architecture's next companion species, and what new forms of architecture will emerge to sustain them? ◆

ENDNOTES

1. Ingraham, C. *Architecture, Animal, Human: The Asymmetrical Condition* (New York: Routledge, 2006), p.192.
2. Wolfe, C**.** *What is Posthumanism?,* (Minneapolis: University of Minnesota Press, 2010), p.xv.
3. Grandin, T., 1990. "Design of loading facilities and holding pens." *Appl. Anim. Behav. Sci.*, 28: 187-201.
4. Wolfe,p.117.
5. Haraway, D. *Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003),p.25.
6. Von Uexkull, J**.** *A Foray into the Worlds of Animals and Humans*. (Minneapolis: University of Minnesota Press, 2010)