

A (Non) Humanist Approach to Design

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Introduction

The question of the “other” in design discourse is one that has been punctuated by the emergence of a post-humanist theory as of late. It is not a new question, but one that has expanded a take on new definitions of “human”. It has given attention to, and renewed focus to marginalized and underrepresented persons; and more importantly, it has brought to the forefront, the role of nonhuman agents that frame our understanding of the co-evolutionary nature of context and information embedded in design and technology, and the systems and environments in which they represent.

To address the “other” is to partner one's own perceptual and cognitive knowledge with that of “another”. It is an attempt to observe and to apprehend a broader realm. By actively folding in “another” into the process of design inquiry, we are better able to widen our observational and operational domains, and more importantly, construct an informed methodology that mediates design thinking with decision-making – an approach that holds greater potential for social impact and human affordance.

The humanist approach to architectural knowledge and production has traditionally taken the body as the irreducible unit of measure. Humans, in an effort to make their environments more productive and compliant have changed both the definition and composition of what we consider architectural space. We have re-shaped it, re-constituted it, and re-organized it; by first using ourselves (our bodies) as a metric, and then others (i.e. animals, objects, machinery). Ultimately, we have arrived to consumer and industry standards – universal metrics that subsume all differences and diversities. As architecture – and alongside it, other disciplines of spatial design and planning – more fully address the issues and needs of our contemporary urban landscapes and constructed environments, this not only shifts how we design, but what we analyze and why we intervene.

“To draw a carp, Chinese masters warn, it is not enough to know the animal’s morphology, study its anatomy or understand the physiological functions vital to its existence. They tell us that it is also necessary to consider the reed against which the carp brushes each morning while seeking its nourishment, the oblong stone behind which it conceals itself, or the rippling of water when it springs toward the surface. These elements should in no way be treated as the fish’s environment, the milieu in which it evolves or the natural background against which it can be drawn. They belong to the carp itself, insofar as it is not defined as a distinct form capable of a set of movements or as a particular organism performing a series of functions. Instead, the carp must be apprehended as a certain power to affect and be affected by the world. In other words, rather than a formed and organized individual, the brush should sketch a life, since a life is constituted simply by traces left behind and imprints silently

borne.” –Michel Feher, Sanford Kwinter, and Jonathan Crary “Zone 1/2: The Contemporary City” (1987).

In a sequence of two undergraduate design-research studios at Harvard University, beginning design students were asked to examine the city through a nonhuman “urban agent”, which became the indicator and lens to how one could both interpret and re-imagine their built surroundings. The decentralization of the human body, as well as the human experience, repositioned the city, its manufactured artifacts and its coupled infrastructure with novel contexts for design intervention. The collection and visualization of these nonhuman perspectives – and their re-interpretation as formal and material assemblages – became the studio’s focus of enquiry.

Background

In its institutional context, the two studios pursued the study of architecture and landscape urbanism within the charter of a liberal arts education. The studio was jointly administered between the Graduate School of Design and the Department of History in Art & Architecture. Students from all parts of the college, with backgrounds in visual and environmental studies, public policy, biomedical engineering, molecular and cellular biology, economics, computer science, and applied mathematics have all been enrolled in the course sequence since its inaugural class, five years ago.

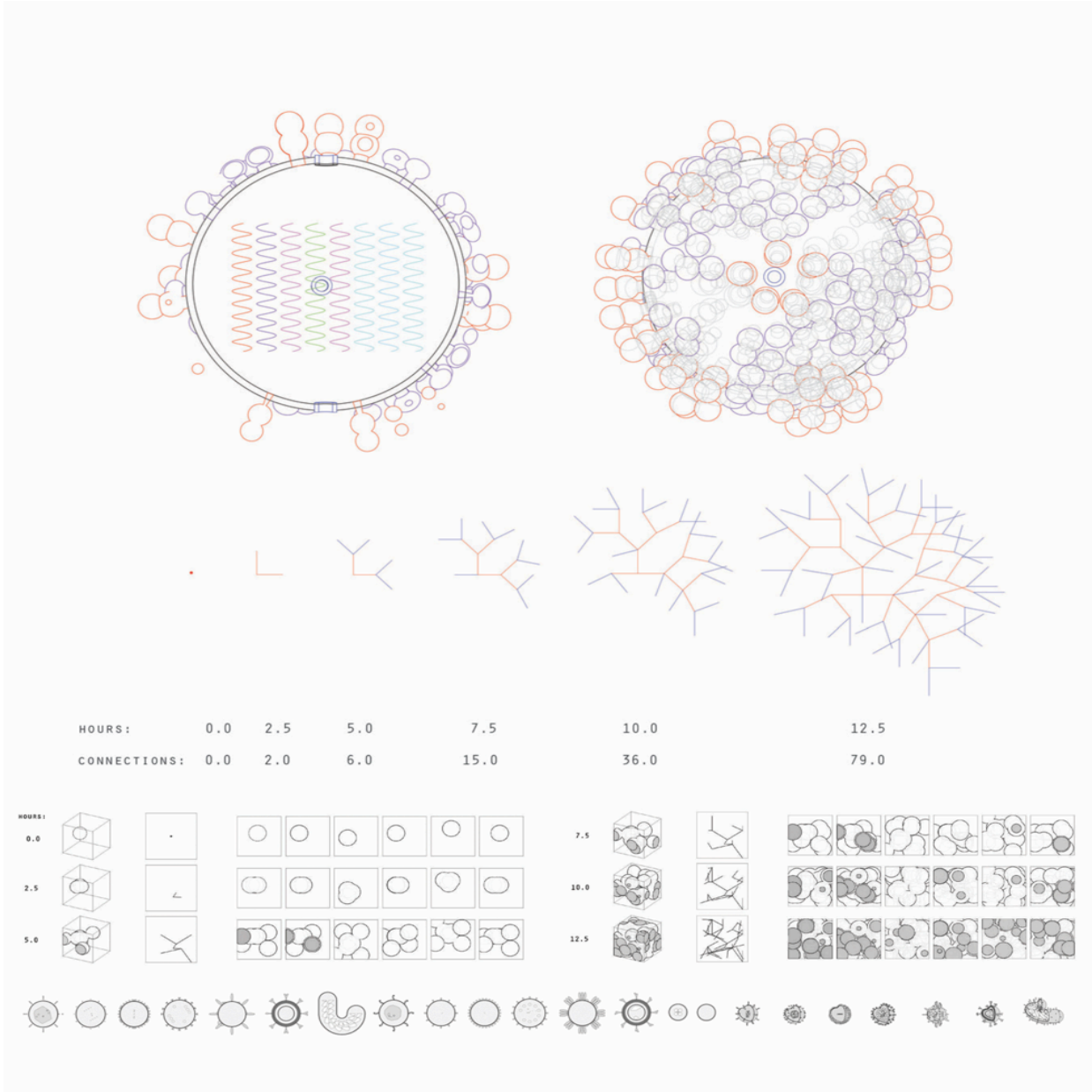


Figure 1. Virus: morphology in relation to duration and distribution in relative space. (2015)

As the first in the series, the Transformations Studio introduced basic architectural concepts and techniques used to address issues of form, function, and material. The course provided instruction on project analysis, visualization, and fabrication using both analogue and digital modeling techniques.

Students proceeded through a series of progressively complex investigations of transformational processes as an introduction to architectural design; and from beginning to advanced design principles, skill sets, and critical thinking, these course objectives were realized through the act of making.

The first studio framed the subsequent undergraduate studio, the Connections Studio, where students investigated sites and systems through an analysis of socioeconomic conditions and environmental processes. In particular, each student's investigation revealed latent, suppressed, emerging, provisional, and otherwise unmapped connections, which influenced the formulation and extents of the urban networks they inhabited.

With a design-research methodology that emphasized observational, analytical and representational techniques, students examined the metric, logic, and operations of an urban agent, to provide an opportunity to step out of one's own anthropocentric understandings of the systems and environments that envelop them, and to sharpen a knowledge set of the interconnections, correspondences, and continuities that enable those surroundings. Experiencing the perspectives of these urban agents exposed the city – its cultural identity, historical footprint, pattern of growth and/or decline, etc. – in unforeseen ways. And the collective behaviors and actions of these urban agents informed and predisposed our preconceived spatial notions and strategies underlying built form.

The selections of urban agents were intentionally nonhuman, and yet common and ordinary organisms and artifacts in the everyday fabric of the constructed environment. These included a mosquito, plastic bottle, bee, apple, virus, brick, newspaper, pigeon, smog, pollutant, rat, weed, and so on. In selecting an urban agent, students considered these questions throughout their investigations: How does the agent occupy, appropriate, manipulate, adapt, reconstruct or otherwise operate in a specific context? How would looking through the lens of an agent expose and/or transform the appearance, focus, and scale of the city's perspective in unexpected ways? How does revealing this alien perception of our surroundings become a basis for architectural design?

Viruses are the most common cause of infection and disease, and directly impact human health and hygiene and the sanitation of interior spaces. Indirect transmission predominantly occurs through the contamination of surfaces that range in context (e.g. tables, floors, doorknobs, railings, curtains, carpeting). Through the lens of a virus, the student investigated the configuration of architectural elements, specifically walls, floors, and openings, in order to examine the relationship between environmental surfaces and particle systems. Diagram by Hooln Linda Song.

Whether located in the cracks of concrete pavements or overhanging from brick walls and steel bridges, the spontaneous growth of weeds in indiscriminate locations (i.e. vacant lots, highway medians, contaminated brownfields, etc.) reaffirm these environments as places ripe for urban ecologies that have fully adapted and become resilient to years of urbanization. Through the lens of a weed, students proposed alternative programs for marginal and interstitial landscapes that were once regarded as abandoned and/or underutilized. Diagrams by Katherine Ingersoll and Jay Drummond.

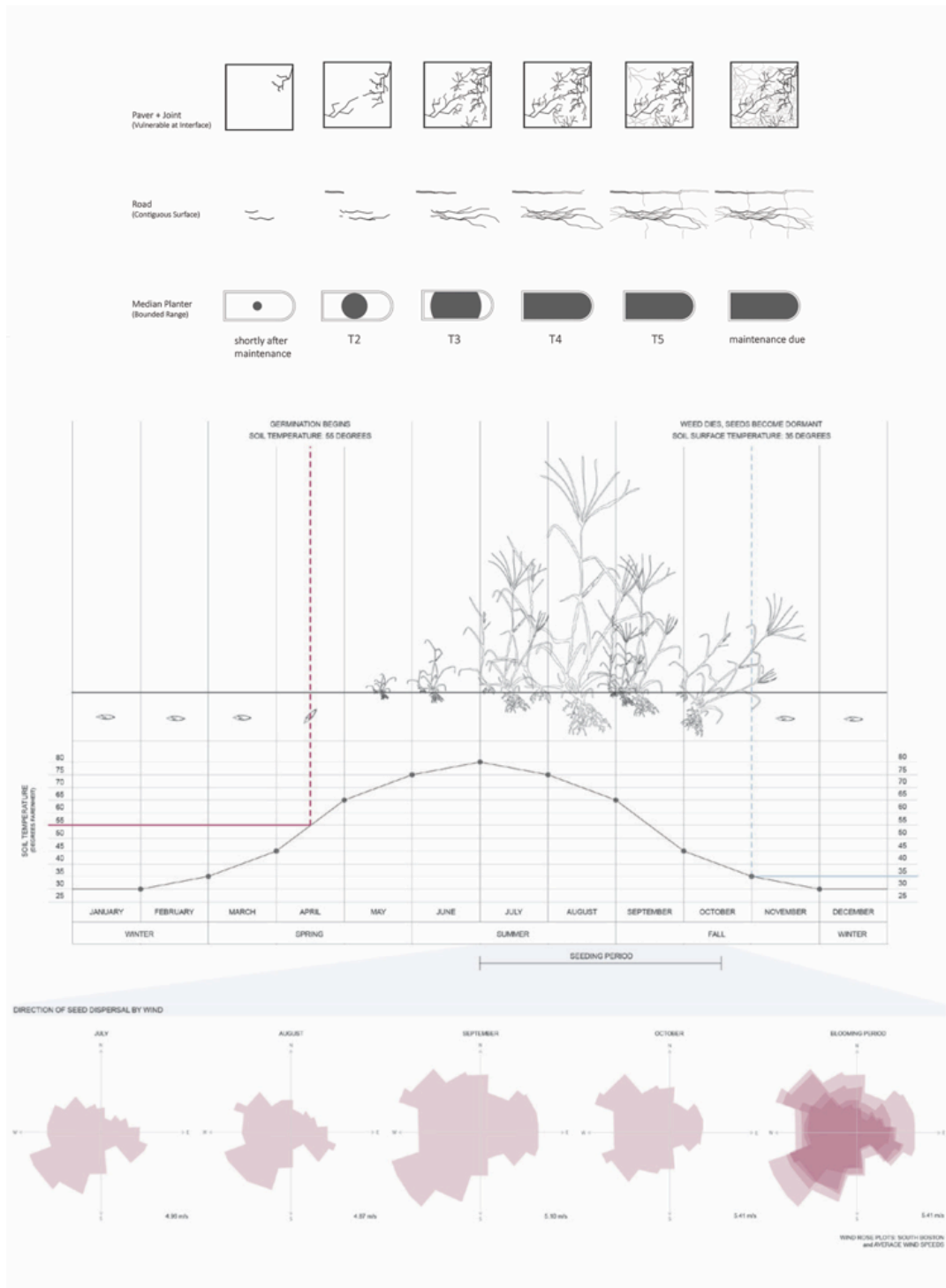


Figure 2. Weeds: species growth and successional patterns as a result of environmental conditions heightened by seasonal flux, climatic indeterminacy, and urban situations. (2015, 2016)

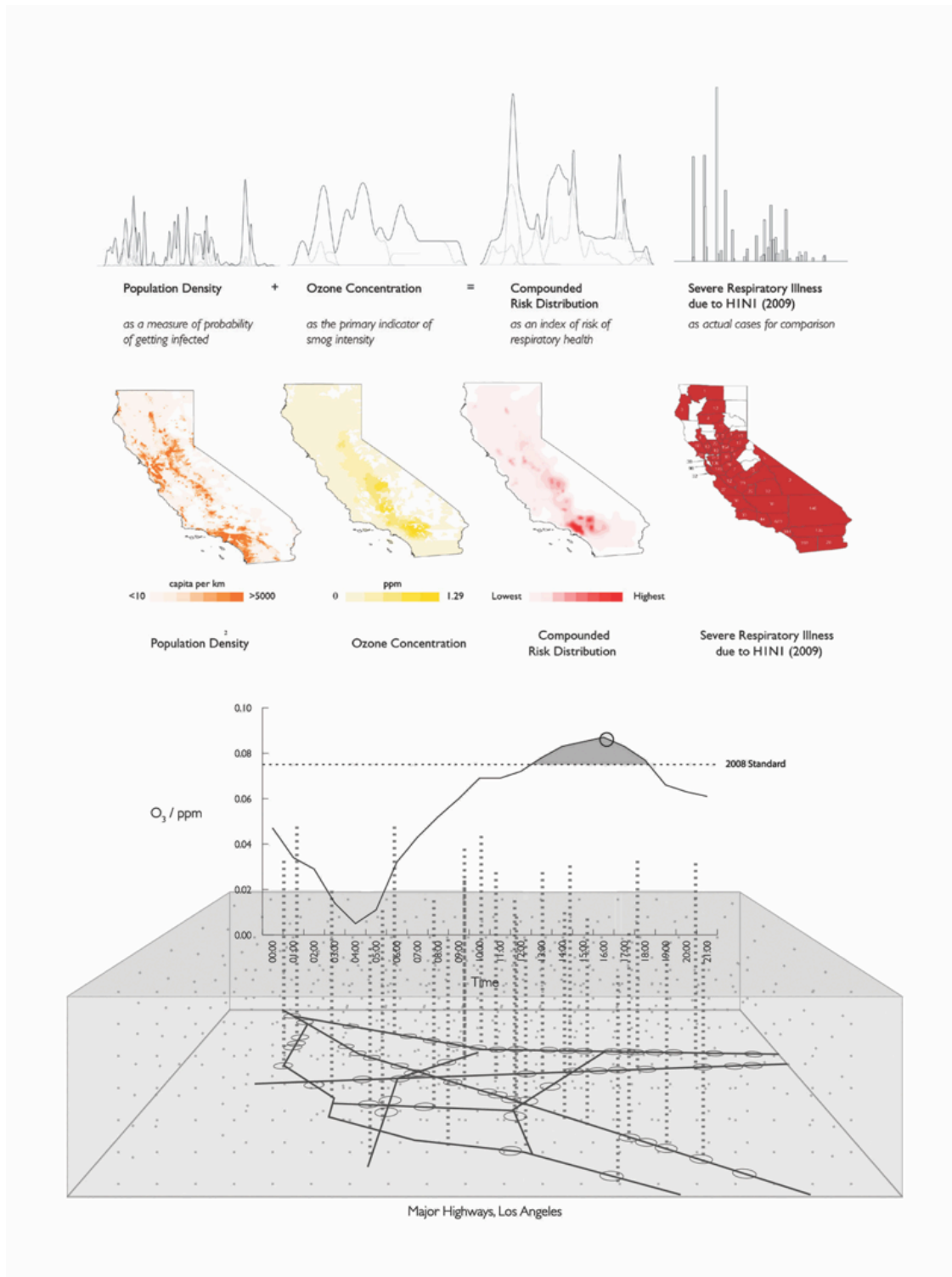


Figure 3. Smog: population density, ozone concentration, and compounded risk of respiratory health for Los Angeles, California. (2015)

Smog can form in nearly any city, where there is a significant release of air pollution; in particular, vehicular emissions from internal combustion engines and industrial fumes. However, a location's

geography, climate, and population can significantly influence the outcome of the phenomena and its correlated effects. Through the lens of smog, a student examined atmosphere as a context and material for design. Diagrams by John Wang.

In the final phase, students were asked to simulate and model quantitative and qualitative data sets based on their urban agent. The information visualizations were meant to be speculative design strategies for the perceptions, operations, and territory of its nonhuman *and* human visitors. In multiple iterations, students imagined visual and material exchanges that depicted unforeseen outcomes, effects, and yields. The compilation of these simulations and models generated varying degrees of responsiveness, adaptation, and flexibility for design opportunity.



Figure 4. *Agent-Based Modeling* (2015).

Through an ability to reframe situations, students can think laterally between (and among) the different perspectives that influence design thinking and decision-making. A non-humanist approach can prepare students to not only solve both speculative and real problems, but also provide them with the ability to approach extraordinary problems through unconventional means. Models by Matthew Ricotta, Gianina Yumul, Hooln Linda Song, James Thurm, John Wang and HeeYoung Angie Jo.

Conclusion

Cities are assemblages of adaptive modes of exchange, economy, and production. They require multiple lenses through which to view their complex spatial structures; and to understand how they are to be conceived, perceived, and inhabited. To understand the latitude of the city is to not just see it as a collection of objects and systems, rather as a multiplicity of diverse constituents, municipalities, and circumstance co-inhabiting with one another. Ultimately, cities are places that are not devoid of human-

centric ideas or nonhuman influence; they are highly impacted by both. The formation and effects of these influences, as a consequence provide us with the opportunity to meet strangers, mysteries, and the unknown – each entity and each situation informing a very different understanding about the lives beyond our own. To understand the layers of a city in simultaneity is impossible – and it requires multiple points of view to understand the byproducts of our culture and the consequences of its citizens. Fundamental to design's agency is its capacity to evoke diverse meanings and interpretations, to expose vulnerabilities, to capitalize upon opportunities and efficiencies, and to envision projective and applied models of reality that could present stimulating and novel contexts for human understanding and experience.

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