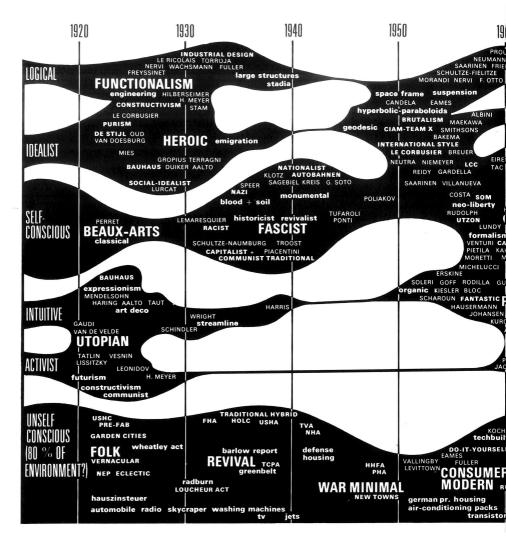
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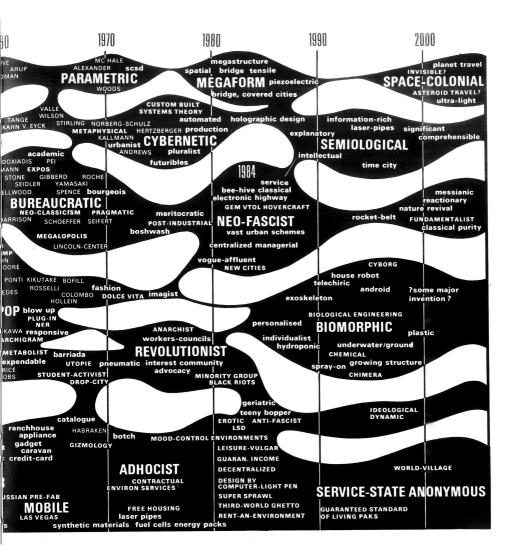
Is an architect, engineer and scholar, currently an Assistant Professor of Architecture and the Director of the Master of Science program at Rensselaer Polytechnic Institute. She holds a Diploma in Architecture and Engineering from AUTh in Greece, a SMArchS from MIT and a PhD from Princeton University. Kallipoliti is the founder of EcoRedux [www. ecoredux.com], an innovative online open-source educational resource and ANAcycle thinktank [www.anacycle.com], a research and writing practice of immersive scholarship. She is the editor of a special issue of Architectural Design in 2011, and the author of the book The Architecture of Closed Worlds, Or, What is the Power of Shit (Lars Muller, 2018), as well as the History of Ecological Design for Oxford English Encyclopedia of Environmental Science. Her work has been exhibited in a number of international venues including the Venice Biennial, the Istanbul Design Biennial, the Shenzhen Biennial, the Royal Academy of British Architects and the Storefront for Art and Architecture in New York. Kallipoliti is the recipient of an honor at the 14th Webby Awards, grants from the Graham Foundation, and the New York State Council for the Arts, an Honorable Mention at the Shenzhen Biennial, a Fulbright scholarship, and the ACSA annual award for Creative Achievement.

Kallipoliti

THE HISTORY LUMP/ HEAPS, HOARDS AND OTHER DARK DATA CLOUDS



Charles Jencks' "Evolutionary Tree for the Year 2000" as published in Architecture 2000: Predictions and Methods, 1971



hat could a lump possibly mean in architectural history? Mapping visually theories and ideas, trends of times, very much like Charles Jencks did in his famous diagram "Evolutionary Tree to the year 2000," is a very tricky subject for historians; historiography and the documentation of currency in the collective architectural mind is for many critics a futile project of classification and establishment the status quo. Still, when we face a visual representation of our current condition, it is quite powerful and inspirational. Even if every form of representation unavoidably is subject to the desires and obsessions of its author, it offers a concise cosmology of current thought and a reflection of where we stand, as well as where we might go.

Charles Jencks' "Evolutionary Tree to the year 2000," which precedes the annunciation of postmodernism included everyone (with a capital E) in the common ground of the map. While working on this, Jencks allegedly tried to operate in a sweeping way very much like a search engine scanning the big data in his head. There are two versions of this diagram, with the original published in Jencks' book *Architecture* 2000 in 1971; its soft, blobby space has become a comfortable ground of mediation where fundamentally conflicting architectural traditions may happily coexist encased in pulsating attractor basins. The smooth flow of traditions, in what is claimed as reversible and irreversible time frames², is to Jencks an analogue biological structure directly excerpted from Charles Darwin's *Theory of Descent* and the evolution of

¹ Charles Jencks, Architecture 2000: Predictions and Methods (London: Studio Vista, 1971), pp.46-47.

² Jencks writes of his Evolutionary Tree for the Year 2000: "The method for determining the six major traditions is based on a structural analysis as outlined by Claude Levi-Strauss, without the claim to completeness which he makes. Some of the relations are obscured because the diagram is only two-dimensional, but generally speaking the pulsations represent reversible time while the inventions and movements are irreversible." Jencks, Architecture 2000, p.45.

species. Jencks even goes as far to suggest the precise differences between 'architectural species' and 'natural species,' criticizing the former of jumping from one to another, marrying whoever they please and producing offspring; whereas in the case of natural species, for instance, "turtles do not successfully mate with giraffes." Most importantly, nevertheless, the evolutionary analogy is strategically used as a tool of prediction and a prophetic claim, given a series of not yet manifest species that lie in the underground (below the diagram) lurking to appear in the future. In fact, Jencks re-published the diagram (with several modifications) in *Architectural Review* magazine in 2000, to validate how prescient he had been in 1971 and announce the end of the century.⁴

Overall, Jencks' "Evolutionary Tree" has had significant disciplinary impact. Many tried to emulate and reenact the blob pulsations and evolutionary lines, including Metropolis magazine's diagram coined "Our Charles Jencks' moment" and ETH professor's Adrian Meyer "Synoptic Vision" diagram in 2008⁶. The "Evolutionary Tree" was a powerful representation of ideological currencies, not because it withstood the test of time as many have argued, but precisely because, graphically, it is not really a tree as it verbally suggests. In contrast to Ernst Haeckel's genealogical tree in The General Morphology of Organisms (1866), Jenck's tree does not branch knowledge from specific roots, neither does it

³ Jencks, Architecture 2000, p.48.

⁴ Charles Jencks "The Century is Over: Evolutionary Tree of Twentieth-Century Architecture" in Architectural Review (July 2000) p. 77.

⁵ See Paul Makovsky, "Our Charles Jencks Moment" (April 2011) in http://www.metropolismag.com/story/20110414/our-charles-jencks-moment (accessed September 29, 2012).

 $^{^6}$ Adrian Meyer, Susanne Kuhlbrodt, Beat Aeberhard, Architecture--A Synoptic Vision: Example of an Evolutionary History (Basel: Birkhauser Verlag AG, 2008).

⁷ Ernst Haeckel, Generelle Morphologie der Organismen: Allgemeine Grundzüge der Organischen Formen-Wissenschaft; mechanisch begründet durch die von Charles Darwin reformirte Descendenz-Theorie (Berlin: G. Reimer, 1866).

impose a hierarchy based on a rule-based forking system. Moreover, it is neither a network, with all points interconnected in a system. Jenck's tree is a-systematic and a-hierarchical; it suggests information floating, rotating and as he suggests kissing and mating.

What is perhaps less well-known is that Anthony Vidler published a potent critique of the diagram in Skyline ten years past its fabrication. Vidler argued against Jencks' blunt evolutionary analogy and his parallel between styles and living species. He wrote: "The species International style, for example, got up one day, and like some giant python, swallowed live expressionism, purism, de Stijl, industrial design, Art Deco, Constructivism, together with almost all the organic architecture of Wright. No wonder the resulting indigestion brought on an attack of post-modern."8 At first sight, Vidler's attack was founded on the 19th century tradition of stylistic classification in art history originating from German art historian Johann Joachim Winckelmann, According to Vidler, Jenck's categorization of the six major architectural traditions is directly linked to the history of styles and tastes, which he evaluates as a-historical. This type of classification, therefore, renders a surface understanding of history reducing art and architecture to an exercise of identifying difference between styles.

Digging deeper, it was precisely the idea of favoring a generalized "pluralism," devoid of all social, political or even functional questions that enabled the poignancy of Vidler's critique. Closing the article, he writes, "It is this last, the idea of 'pluralism' as the spirit of the post-modern age, that is perhaps the most pernicious of Dr. Jencks' historicisms. For, disregarding the fact that much the same phenomena of difference and diversity might have been identified from

⁸ See Anthony Vidler, "Cooking Up the Classics," Skyline (October 1981): 18–21.

the late seventeenth century on, and most especially, in the modernist period itself, this assumption of a plural universe of culture covers a fundamentally anti-pluralistic agenda."9

Eventually, the debate was focused on the visualization of the world as a collection of ideas, tendencies and concepts, which can all simultaneously coexist without friction or battle. The basic problem of pluralism is not the discipline's fragmentation in hundreds of different paths and directions, but the absence of resistance. Pluralism offers no ideology; no position; no argument; no fight; no ground for a conflict where we can all agree to disagree. Then, is the act of classification futile in itself? Is it the case that by categorizing genealogies of thought and practice, these genealogies have already become obsolete by being classified as part of the status quo? The world is a statistical object understood as an ever-growing body of big data as expressed in the rule of thumb that anything is documented, analyzed and included at some list, somewhere. The world is now full of events without good or evil, but for which our field and our very existence is philosophically and politically unprepared.

In the era of big data, Jencks feels his predictions have been validated. We are still in a splintered era; a time of anxiety and ideological diffusion, with no prevailing schools of thought and only a vast array of sub-genres to mark the lines of paradigms and disciplinary canons. However, this splintering is changing and expanding the very nature of design itself in a very different direction than that of the evolutionary tree or even that of the network. We are observers of practices which suggest an open, collaborative, system-oriented approach: flying drones which create temporary Wi-Fi networks in isolated areas; DIY construction kits; manufacturing at home through personal 3D printers;

⁹ Vidler, "Cooking Up the Classics," p.21.

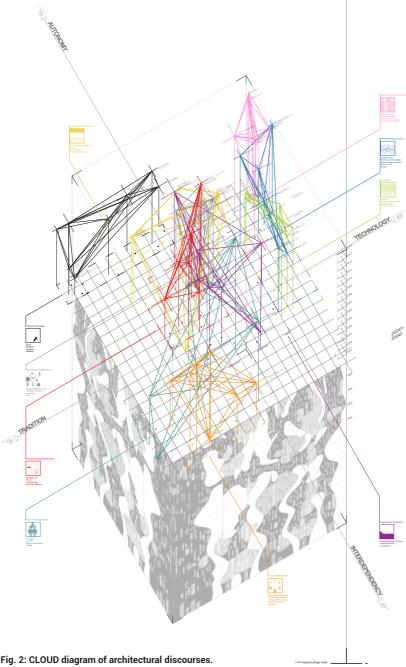


Fig. 2: CLOUD diagram of architectural discourses.
Lydia Kallipoliti with Eduardo Alfonso, Gabriela D'Angelo, Andrew Lam and Shiori Sasaki, The Cooper Union, New York (Spring 2012).

a Wikihouse with open-source plans that can be replicated, improved and updated anywhere; and countless other examples¹⁰. This certainly does not mean that the discipline is dead, but the identity of the architect as single author of space might be. So is the venture to classify disciplinary objects based on their iconicity. Buildings now produce, as Sylvia Lavin suggests, "mood boards" for collective action, "deferring iconicity to the internet, where an endless supply of videos, maps, tourist photographs, tweets, logos, and blogs offer image after image of the lab in use, not in use, about to move, and in motion."

In response to these conditions, with a small group of students at the Cooper Union in 2012, we took it as an independent research project to redraw, redefine and render obsolete Jencks' "evolutionary tree," by replacing it with a cloud of ideas in contemporary practice. (figure 2) Our cloud diagram was constructed as an open-source collaborative platform where different creators, collectives, ideas and projects come together in a conceptual ecology of discourses. Following the unrealized vision of the "evolutionary tree" as a three-dimensional structure, the cloud was designed in three dimensions, with time on the vertical z axis. The horizontal x-y plane is divided in four regions, dissected by two sets of disciplinary forces. The first axis indicates the line between tradition and technology, as was suggested by Reyner Banham in his Stocktaking article series in Architectural Review circa 1960. The second axis indicates a line between disciplinary autonomy (as witnessed in formalism, tectonic language and syntax) and disciplinary interdependency (as witnessed in pursuits of social reform, environmental improvement and political effect and so forth). In the cloud diagram, only projects and buildings are registered as

¹⁰ See Elian Stefa and Ethel Baraona Pohl, "NCR-01 [Agenda]: An Ad-hoc Revolution," published online on May 24, 2012 in http://istanbuldesignbiennial.iksv. org/ncr-01-agenda-an-ad-hoc-revolution/ (Accessed September 29, 2012).

¹¹ Sylvia Lavin, "The Report of My Death" in Log 25 (Summer 2012), p.159.

independent events, not movements and traditions. (figure 3) Each project is represented with a cross, the size of which reflects the disciplinary impact of the project according to data retrieval in Google analytics; projects which were Googled extensively at a certain period of time receive a large cross at that time, whereas the cross diminishes along with their impact in the culture of "momentality". 12 Objects, therefore, have no contour; only associations which can dissolve and reorganize, form and reform. What was surprising in working on this documentation was the mixing of projects in overlapping regions; although when we were conceptually documenting the sub-clouds of the big cloud in categories, as witnessed in this table, we had a fairly clear perception of distinctive categories and principles, in the graphic representation, the data retrieved from Google analytics blurred almost seamlessly our original classification lines and forged associations of conflicting ideological agendas. (figure 4) The cloud therefore necessitates an entirely different way of understanding the world, "one that requires us to lose the tether of data as something that can be visualized in its totality."13 Growing out of Google's model of detecting correlations through applied mathematics and not through context, the cloud ranks fractional connections above holistic perceptions of phenomena. What is essential about the cloud is the absorption and collection of data that crystallizes in a region, rather than the overall contextual interpretation of the data.

The main question, though, is if our cloud is in any way different from Jencks'? Somewhat yes, I would argue, but not in a truly transformative way. Despite the numerical backup

Momentality is defined in opposition to Monumentality: as a documentation of things according to the moment they occur versus their meaning and diachronic existence.

¹³ See Chris Anderson, "The End of Theory: The Data Deluge Makes the Scientific Method Obsolete" in Wired 16:07 (June 23, 2008).

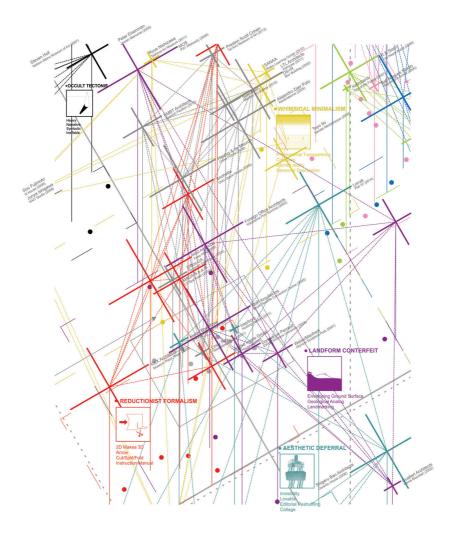


Fig. 3: Zoom-in to CLOUD diagram of architectural discourses. Lydia Kallipoliti with Eduardo Alfonso, Gabriela D'Angelo, Andrew Lam and Shiori Sasaki, The Cooper Union, New York (Spring 2012).

of Google analytics, there is still representation, still predetermination. It is a fact that the observer and even more so. the author, influences the object of representation. There is nothing new to this claim. It has been propagated through the theories of self-organization in second order cybernetics, as well as through Heisenberg's principle of uncertainty. Resolutely, the white blobs in Jenck's diagrams are objects of desire and objects of agency, unable to be quantified in precision both in terms of their figuration as well as in terms of their size. What does a white whale mean as a historical void? Jencks only knows, yet he pretends to be as surprised by the findings of his own diagram as he would have been facing a spreadsheet of traffic control in the greater London area. No designer can be an actual observer, as the representational choices inevitably become metalanguages of ideology. This last point, is as much a postmodernist thought as much as the very rise of postmodernism as a phenomenon; that of a happy pluralism emerging from Jenck's diagram. Looking back at our cloud diagram, although we intentionally attempted to resist the survival of the fittest logic of optimization, we failed to allow a pattern alien to us visibly emerge out of the soup. My wish was to see somehow the raw vision of code; not in zeros and ones, but in a new visual language of hoards and piles. It was to see the buried, dark part of data; that which cannot be represented via my own 'metalanguage' of representation, but that which would simply exist as a new nature, independently of whether we created it or not.

The child of dark data might be a featureless lump with accidental properties, an emerging condition which exists beyond our sense of representation and perception of the world as we encounter it. We need new visual tools to understand these conditions. No longer are our personal impressions personal in the sense that they're merely mine or subjective only. They are footprints of larger data heaps and

hoards that register into our every form of existence in the world today.

Data is becoming nature, has already become nature, for there is simply too much data around for it to be decoded and processed into intelligible information. No one has got hold of our data; it is everywhere. It passes through our hands and is used by us, but it is rarely understood. And yet, the presence of advocates for more data collection is ubiquitous. While we are counseled to dream of a better world with more data, the hoards, piles and data debris gather around us like murmurations; a silent yet ever present rumor touching us at every turn. And if we slightly borrow from the Cyberpunk scenarios of the 1980s, this new reality has no room for plots, scenarios, scripts and literary structures where authorship and intentionality are allowed. As Philipp Theisohn mentions in his account of big data's dark side, big data speaks to us from a world in which storytelling is found only as a memory buried beneath the data and this memory has to be salvaged from the detritus of digital reality, the data garbage.14

Along these lines, Facebook user Matthew Putnam made the following comment in April 2015: "My children don't code even though they are interested and talented in science and technology. My theory is that the pervasiveness of the ease to be a user, rather than a creator of digital technology, has pushed the creativity towards the analog. Could this be the same in design? If so, it is a problem. There is something all too pervasive in the things that feel new, but they are not truly transformative."

In response to this comment, another Facebook User,

¹⁴ Abstrakt No.12 (Pocket Laboratory for the Future) White Noise: Why a Data-Driven Society Needs More Common Sense (Zurich: Neue Zürcher Zeitung Publishing & W.I.R.E thinktank, 2013).

Francis Bitonti wrote: "When I was a kid my parents couldn't get me off the computer but I was making video games and not playing them. I was creating websites and not surfing the web. The internet was unfinished and fascinating. It was a lesson in the power of computing. I realized that we were shaping a new world and code was the medium... I hope this enthusiasm does not get lost. I consider my generation to be facing problems closer to what modernists had to cope with. Modernism was about creating a design language for new society with a new set of technological capacities. We are making designs for an information driven society. This is not a time to be manipulating language, playing analog games with that language. This is a time for creating language and grammar."

Coding was once a means to formal complexity; not so long ago. It was a way out of the impasse of reductionist formal intent and a creative way to introduce uncertainty, by superimposing and juxtaposing multiple levels of representational perception. It was a question revolving around possibilities enabled and empowered through digital tools. This premise is already obsolete, though what is it replaced with? An anachronism of kitten shaped buildings for a pop audience? The world is splitting between us as users and players of blissful games and us as enablers of new directions and new natures as lumps of big data. Coding is thus no longer an issue of form making or even of optimization. It becomes a cultural and societal responsibility; it becomes a grain of resistance to the digital hoard animated by corporations and authorities. In this lump of non-discrete architectures, we cannot afford to simply observe. We need to become active enablers of our new natures. This might be our only way to stay relevant.

As Hubert Damisch writes, the cloud is a body without surface, but not without substance. Although it has no

surface, the cloud is visible.¹⁵ In this sense, the emerging ecology of the cloud- the lump of data- is our contemporary obligation to translate. At the center of the lump discourse lies the question: How does the cloud affect our relationship to knowledge? The permeation of organizational tools in our discipline is not innocent. It is not merely about facilitating and managing knowledge; it also transforms the nature of design, with no return. Is it not critical that we give equal attention to reconsidering our classification systems and how they are affecting architectural discourses? Stay tuned.

¹⁵ Hubert Damisch (translated by Janet Lloyd), A Theory of Cloud: Towards a History of Painting, (Stanford, CA: Stanford University Press, 2002), p.2.