

Paradigmatic Resolution— The Debased Flower Images of Young & Ayata

LOUIS I. KAHN, Visiting Assistant Professor—
Yale School of Architecture. Founding partner of
the architectural design studio Young & Ayata



Architecture once had a technique for dealing with the problem of scaled mediation. The large buildings were drawn to a proportionally smaller scale. The scale could be changed to allow more or less detail to be described. Key to these scale shifts was that the representations stayed at the same resolution. A site plan had the same amount of resolution as a construction detail, the only difference was that the lines described an increasing amount of design information. Most architectural projects could describe the building in its entirety with five differently scaled sets of orthographic drawings. As the architect worked within each scale there was an aesthetic and conceptual attention to what the resolution of the drawing at that scale could handle. The architectural project was considered fully thought through once this collection of different scaled fragments could be interrelated as a set.

This representational paradigm has been radically transformed with contemporary digital techniques. No longer is the architectural design drawn at a reduced scale, it is modeled at full scale. The representations generated from the digital model are rendered extractions. The model can be rendered as line-work and manipulated to meet the conventions of line drawings, it can also be rendered as photo-real and manipulated to fit the conventions of photography, it can also be rendered as graphic and manipulated to fit the conventions of the graphic novel. All of these are rendered images used as visualizations from the data of a digital model.

The digital model alters architecture's representational concerns regarding scale. The problem can be simply stated as a tension between the "actual" resolution of a digital model, and the "imaged" resolution of the same set of information. All media, screen monitors, paper/film prints, and 3d fabrication operate at a resolution. All digital models are built at a resolution. Often, both of these discrete fragmentations of continuity operate below our thresholds of perception. When our sensorial equipment (eyes, hands, ears, etc.) cannot identify the discrete fragments, we call these mediations Hi-Res or Hi-Fidelity. These are misnomers. They are not different in kind from what we call Low-Res. The only difference lies in how our perceptual systems register the distribution of sensible information. This is the concern of aesthetics. All digital objects are discrete, operating at various levels of discretization. This fragmentation modifies the aesthetic character of the digital image, object, or sound. The approximation of smoothness,

chunkiness, hairiness, shininess, transparency, abstraction, realism all bear on the quantity of pixels, voxels, polygons, or control points used to describe the object.

I used the term "paradigm" above. This transformation of the aesthetics and concepts of scale to those of resolution is a transformation of a distinct architectural representational paradigm. I am using this term in a specific manner that must now be explicated. As initially identified by Thomas Kuhn in *The Structure of Scientific Revolutions* (1962), and then further elaborated by Giorgio Agamben in the essay "What is a Paradigm?" (2008), there are two different usages of the concept "paradigm".

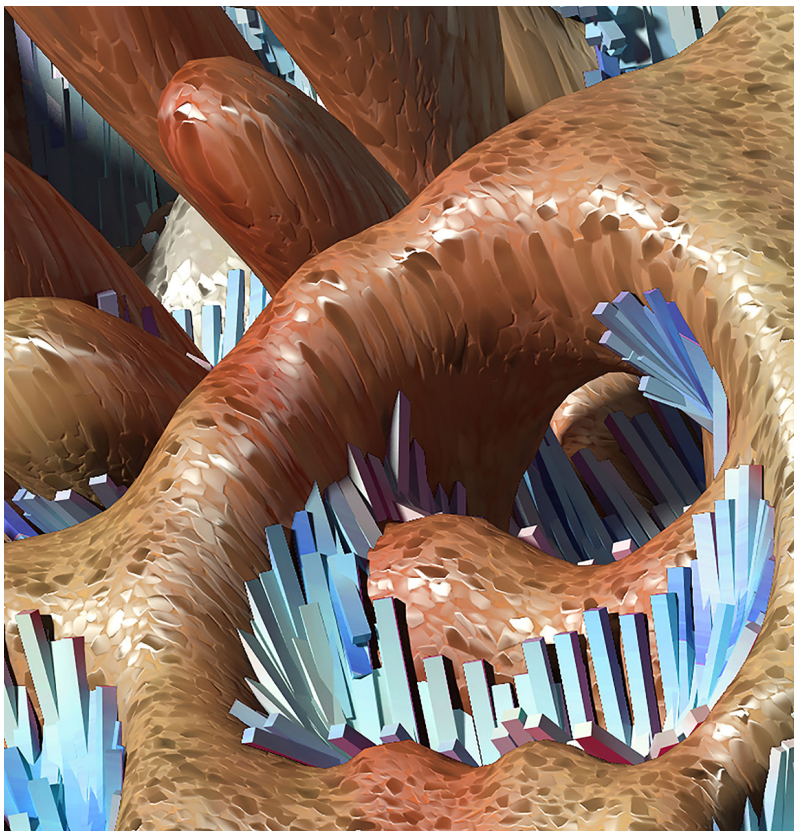
"Kuhn recognized that he had used the concept of "paradigm" in two different senses. The first meaning of "paradigm", ...designates the common possessions of the members of a certain scientific community, namely, the set of techniques, models, and values to which the group members more or less consciously adhere. The second meaning refers to a single element within the set, such as Isaac Newton's Principia or Ptolemy's Almagest that serves as a common example and thus replaces explicit rules and permits the formulation of a specific and coherent tradition of inquiry." Giorgio Agamben from What is a Paradigm? (2008)

It is this secondary sense of paradigm that both Kuhn and Agamben find the most novel. A paradigm is an example, a single case, not the general theory or the series of rules; but a redistribution of sensible information that presents the intelligibility of a concept "beside" it (para). When this is applied to the discipline of architecture, we find that we quite often use "paradigm" in this second sense, we structure pedagogy through examples that make ideas sensible, many of which are the basis for architectural discourse. The set of scaled drawings was exactly such a representational paradigm for the discipline of architecture from the Renaissance till the early 21st-century. It is crucial in this discussion of paradigmatic shifts to identify which aspects of the paradigmatic example are being changed. These differences allow us to avoid a slip into the first definition of paradigm referenced above, a slip that views a paradigm change as total. Instead by focusing on specific examples we can more clearly see what is at stake.

Scale is still operative in the digital model, but it has undergone a transformation. Scale as a distinct regulatory proportion for a set of representational conventions has been replaced by an apparent real-time updated rendering engine simulating the camera lens effect we call zoom. As a designer zooms into a digitally modeled surface the movement is incremental and apparently continuous, but there will be a moment where the fragmentation of the surface becomes visually apparent. The closer to the model, the clearer the information, but also the "lower" the resolution level this information appears. The close view appears more fragmented, artificial, and abstract, the far view, smoother, more "detailed", more real.

These are a completely different set of aesthetic effects than the question of scale within the previous paradigm. What is opened here is a tension between abstraction and realism as an

aesthetic effect of resolution. This is further compounded when considering the resolution of the media used to evaluate the design. The unit of the display comes into play the moment that the model is rendered. This can be a rendering of line-work, tone, texture, or materiality, but as soon as the design is "rendered" it is locked to a certain resolution of display. This is also not necessarily a condition that occurs at the end of a design, for modeling software is constantly updating the visualization as one moves, rotates, or zooms. Once



locked, the zoom of scale quickly reveals the fragmentation of pixels. The outcome is that the collaged adjacency of discrete colored information becomes revealed as the universal medium of digital work. This is work on images, not drawings, not photographs, not graphics, but collages. The difference from historical collage is that the digital image typically conceals its seams below the threshold of perception; (hi-res).

In the winter of 2015, Young & Ayata developed a series of flower vases for an exhibition titled Base Flowers at the Volume Gallery in Chicago. Coinciding with the vases were a group of 3d-printed full-color flowers. The flowers were

of our design, intended to allude to existing flowers, but also clearly of another origin which for us was a crossing of the digital, geological, and biological. As we tested the 3d-prints, it became apparent that the crucial question regarding the plausibility of these as "real" objects, (not prototypes or models), lied in the resolution of detail, pattern, and color. The flowers would look real from certain distances, but then fake at others. This discrepancy intrigued us. To push the project further, we undertook a series of digitally rendered images that developed the flowers at different scales using the analogy of zooming into the texture of the surfaces. The investigation was initially to provide another level of detail not seen by the human eye in the 3d-print, but quickly, other aspects began to become more interesting. Under an extreme zoom the surface polygons began to be visible. Instead of smoothing and refining these meshes, we left them alone, but inserted new objects with different levels of detail/resolution into and adjacent to the initial flower surfaces. When the apparent resolutions became mixed, an alternate aesthetic effect was triggered. It could be assumed that this would look more artificial or abstract, since the surfaces are exposing their digital geometry in a way that is usually hidden, but the mash-up of less detailed objects with local patches of higher levels of detail began to provoke a desire to pay closer attention to the images. This is an effect that we typically attribute to "real" things like "real" flowers. The abstraction of mixed resolutions was producing a disturbing tension, becoming a strange realism. Important for us was that the exposure of the disjunctive fragmentation was shifted from the surface of the medium into what the medium was representing. This was not a medium specific revelation regarding digital images, we fully embraced the desire to hide the seam of the pixel at the level of the image. Instead, we attempted to push the question of variable resolution into the aesthetics of the object itself. The result is that one begins to doubt what one is looking at, and from this doubt there is an elongation of attention; an aesthetic redistribution initiating a conceptual re-evaluation. We called these Debased Flowers.

Architecture's paradigms of representation are moving more and more into digital mediation. As this happens, it is tantamount that we understand that this is not the wholesale paradigm shift some have preached or feared, what seems more apt, is that some aspects are steady, others transform, and still others have entered into strange uncharted lands we are only beginning to understand aesthetically and conceptually.

1 Giorgio Agamben, "What is a Paradigm?", In *The Signature of All Things: On Method* (Brooklyn: Zone Book, 2008), 11.

Recent Exploits of Flon Mask

ANONYMOUS

Invented a space flight company that provides affordable rides to the moon and back for families. Descended from the cyclorama, SpaceY consists of a capsule in front of a screen with looped imagery of outer space cranked by hand by recent Stanford computer science graduates.

Actually built a real rocket with SpaceY but decided not to go to Mars. When asked to explain the decision, Mask replied, "I don't really see the point."

Decided to send the rocket to the center of the earth instead; it melted about 5 miles in.

Invented a new type of roof shingle that looks like solar panels, so you can proclaim that you're doing your part without actually having to spend all that money.

Invented a "driverless" car called the Ohm in which the windows have decals with a picture of the interior to make it look like nobody's driving.

Mask also tested an Ohm model nicknamed "seat suit" in which the driver would actually be camouflaged inside a driver's seat complete with armholes and a hole for the face.

Invented a hyperloop model where instead of transporting humans, it transported liquids. Mask named it "oil pipeline."

Mask is heavily inspired by the works of Isaac Asimov, as can be seen in the subtle, poetic language of his tweets.

Decided to bore a tunnel from San Francisco to the White House.

Developed a way to connect the human brain to computers. The setup consisted of two wires and a pickle; it managed to turn on a light bulb for 2 minutes and 24 seconds.

Invented a clone of PayPal where a fee on each transaction goes toward swaying elections and suing media companies out of existence.

Week 1 - On The Ground

MATT LIU, M. Arch '20

01/11

First year building project now in motion. Here's to hoping everything goes smoothly. No lotion.

Alan Organschi is quite charming. Not what we expected, truly alarming.

Lottery day, advanced studio leaders present their classes. Students await anxiously to hear which class they're in. To pass the time, some students dined, most drank.

Visiting Louis I Khan professors Róisín Heneghan and Shih-Fu Peng (hparc) initiate this semester's lecture series. Enhance thin lines!

01/12

Monday classes were held therefore most people had another dose of studio.

6-on-7 returns, conversations were mainly based upon what each other had done during the break.

01/13

Honestly, was anyone productive today?

Heard around the school

"YES! I saw on your instagram story, that looked so fun/delicious/beautiful"
"...already looking forward to the next break"
"So where did you go?"
"Who is 'Shoes of YSOA'?"

Lottery Musings

"This is so fucking stressful"
"People can be so toxic on lottery day"
"I don't know how I got my first preference, I didn't even have any points!"
"...this is a mission impossible project"

Issue Editors
Lucia Venditti
Mariana Riobom

Graphic Design
Evan Chang

Coordinating Editors
Nicholas Miller
Matthew Wegstaffe
Ethan Zisson

Publishers
Jeremy Jacinth
Nadeen Safa

Web Editor
Seth Thompson

The views expressed in paprika! Do not represent those of the Yale School of Architecture. Please send comments and corrections to paprika.ysoa@gmail.com. To read Paprika! online, please visit our website, www.ysoapaprika.com.

Editor's Note

In the late 1950s, the art critic Mario Pedrosa stated that Brazilians were condemned to be modern. His words referred to his country's seemingly irreversible drive toward the new Pedrosa's phrasing echoes that of Jean-Paul Sartre, who only years earlier stated that "Man is condemned to be free; because once thrown into the world, he is responsible for everything he does. It is up to you to give [life] a meaning."

Condemned to be Digital picks up on this theme of inevitability. The digital era has been here for quite a while now, and the domain of the digital only continues to expand. The field of architecture has embraced digital change and laid the groundwork for new techno-social paradigms. As the implementation of digital technologies has affected design in its various disciplines, this issue aims to evaluate the increasing impact of the integration of digital media technologies in architecture.

1 Existentialism from Dostoyevsky to Sartre, ed. Walter Kaufman, Meridian Publishing Company, 1989:28.

Condemned to
Be Digital

Paprika!

Volume 3
Issue 10
January 18, 2018

