From Diagrams to Fictions: Populated Plans and Their Buildings

STEWART HICKS
University of Illinois at Chicago

Keywords: populated plans, fiction, diagrams.

This essay builds on and reacts to concepts initiated by Dora Epstein Jones in her essay, "Populated Plans." Published in Log 45, as well as presented at a previous ACSA conference, Jones' essay identified the emergence of a ubiquitous (in schools of architecture at least) "new" form of drawing that looks like an architectural plan but isn't due to the inclusion of human figures. This type of drawing is distinct from a traditional plan, according to Jones, because it isn't strictly "architectural notation—data received from the object," nor a universalized geometric abstraction best suited for describing a building's organization. The introduction of busy little people disrupts the universal and particularizes it by depicting scenes of fictional activity, lending the drawing to narrativity and the projection of alternative worlds. This freshly observed and codified instrument is well-suited to representing stories, fiction, and narrative as motive forces in the design of buildings.

What kind of architecture do populated plan drawings produce? How do the rules governing their construction and the viewpoint of their projection influence outcomes? The essay draws parallels between fiction architecture and diagram architecture in an unconventional analogy to arrive at a possible answer. Despite the apparent conflict between their foundational underpinnings, fiction and data, respectively, the more comprehensively theorized diagrammatic practice offers useful concepts and frameworks of understanding for the emerging practice. Most importantly, the idea that a building could be the equivalent of a constructed abstraction, as Toyo Ito argues in his "Diagram Buildings" essay, leads to the possibility of a "populated plan building." Ito outlines the role between data and the material reality of the building in "Diagram Building," so what is the equivalent relationship between fiction, populated plans, and the buildings they produce?

Stories are synonymous with culture. They are essential foundations to our communal identity by helping us to connect with one another and with the world around us. Our predilection for stories runs so deep the human brain seems hardwired to accept and process them. I recently stumbled onto a Netflix docuseries following competitors in a memory competition.[1] Every single participant used a variation of the same technique for their feats of memory—they created associations and stories out of the otherwise undifferentiated data. One contestant explained her process of committing five hundred digits to memory by linking each number to a sound which she then prescribes to an object. She mentally places each object on a fictional walk between her house and the supermarket, recalling them along the way. Left un-narrated, she would never be able to remember all the numbers. However, her brain is able to access seemingly superhuman abilities by authoring and recalling a story full of fictional elements in everyday places.

Today, even the objective-obsessed discipline of architecture is showing signs of a renewed enthusiasm for the power of stories. After years of function, program, material performance, energy, and data as the only acceptable origins for architectural concepts and designs; stories and fiction are now among this elite company. Beyond anecdotal sightings in my teaching experience, the blooming popularity of practices like Bureau Spectacular, Neyran Turan, Studio Weave, SCI-Arc's Fiction and Entertainment program, the Fairy Tale Competition, and countless symposia and conferences prove my point.

I embrace this fictive turn in my teaching and design practice, but I also approach the subject with a healthy bit of skepticism. I have often considered fiction to be the de-authoring device du jour for design decisions, displacing that title from diagrams of the late nineties and early two-thousands. Instead of "the diagram made me do it," "the story made me do it" is an accepted excuse for a questionable or ill-explained architectural move today. Too often, powerful narratives are a way out of being held accountable by offering an inarguable "justification" of building forms. Maybe it is meant ironically and with a wink? Bad is ok if we meant it to be bad, right? We can easily get lost in the provocation of stories and we need to remain mindful of their seductiveness. However, just like literature, they can

be good or bad; they can resonate with their audience, or not; and we should interrogate their role in the valuation of architectural productions.

I want to take the occasion of this paper to build a more robust understanding of fiction architecture by drawing parallels with the more comprehensively theorized diagram practices. In order to transcribe the logics of one onto the other, this paper will begin with a short explanation of diagram practices and then explore the possibilities and limits of their fiction-driven counterparts.

DIAGRAM ARCHITECTURE

I do not want to spend too much time on diagram architecture here because we want to focus on the fiction side of the equation. But for the sake of fully outlining the parallels, a certain amount of description is necessary. Firstly, we can classify various diagram practices by locating where the diagram is instrumental within the design or reception of the production. There are three fundamental situations here and I'll use acronym laden firms as examples:

- diagrams for buildings, where the diagram precedes design;
- diagrams as buildings or buildings as diagrams, where the building is equivalent to the diagram; and
- diagrams of buildings, where they are primarily used to supplement the description of a design intention after the fact.

These three categories are represented by the firms MVRDV, SANAA, and BIG respectively.

MVRDV uses diagrams as part of a research process that includes accumulating and sorting data to reveal why a building should exist. Silodam is a good example, where MVRDV took demographic data and rearranged it graphically to prove why the mixed housing block is necessary to meet the needs of the citizens of Rotterdam.[2] The data collection and representation process allows MVRDV to engage with political players and justify their architectural intervention. The diagrams and data give rise to a building, but not directly, and the results do not necessarily look like their graphical origins.

For SANAA, according to Toyo Ito in his essay Diagram Architecture, the building is a constructed diagram. There is a collapse of the abstract representational tool with its material approximation. In diagram architecture, "you see a building as essentially the equivalent of the kind of spatial diagram used to describe the daily activities for which the building is intended in abstract form.". In these terms, the Toledo Glass Museum is an extruded bubble diagram; the line of the drawing translates directly into a wall of the building. Although this sounds lazy, SANAA perfected the technique with such an elegant minimalism that the uncanny nature of the translation becomes a quality unto itself. The anti-tectonic of the construction provides a new layer of experience and meaning, elevating the quality of experience beyond that of a mere inhabitable drawing.

BIG, on the other hand, designs simple gestural buildings and uses diagrams to help explain the alignment of the form with contingent contextual prompts. The firm's simple massing are prefigured and the diagram comes after to explain and legitimize it.

FICTION ARCHITECTURE

Transcribing this triadic structure to architects who use fiction as an architectural conceit, we can substitute the word diagram for fiction and arrive at:

- fictions for buildings, where the fiction precedes the design
- fictions as buildings, or buildings as fictions, where the building is equivalent to the fiction; and
- fictions of buildings, where they are primarily used to supplement the description of a design intention after the fact.

However, I wish to coin these as myths, fairy tales, and narrations respectively and BS, FAT, MOS offer good examples for each.[3]

Myths are narratives that serve as a context for a building by presenting an alternative reality for it. This alternative may look similar to our reality, and thus offer a form of fictional history for building design, or it may differ significantly by bending physical and cultural laws and norms. In either case, myths allow us to understand natural or social phenomena in a literary way. They may or may not precede the building's design, but they help to explain its formation. Examples include origin stories, Superstudio's comic for the Continuous Monument, Laugier's hut, Bureau Spectacular's comics, etc. A single myth could yield multiple building forms, but often a design that relies on mythical foundations does not make much sense without the accompanying fiction. Or, at least, the myth explains certain aspects of a design that serves no practical purpose. For this reason, myths can yield buildings that would not be welcome in our physical reality, ones which serve a literary or aesthetic purpose as dystopic or absurd confrontation to our expectations.

Fairy Tales are designed constructions that arrange familiar and unfamiliar elements to produce a collision of realities. Fairy Tales exist within our world, but present the possibility of other worlds. Examples include Foucault's heterotopias, theme parks, a Loos interior, FAT's referential facades, etc. Fairy tales offer a respite from everyday life, but they live within it. There is no explicit text for fairy tales in architecture, rather they exist as a set of design strategies that prompt narrativity. These strategies include unexpected shifts in scale (inside is bigger than the outside), suspensions in time (old things next to new things), over articulation (decorated things next to abstract ones), and nesting interiors, among others. Fiction is part of the design process in Fairy Tales, but the fiction is not the reason for a

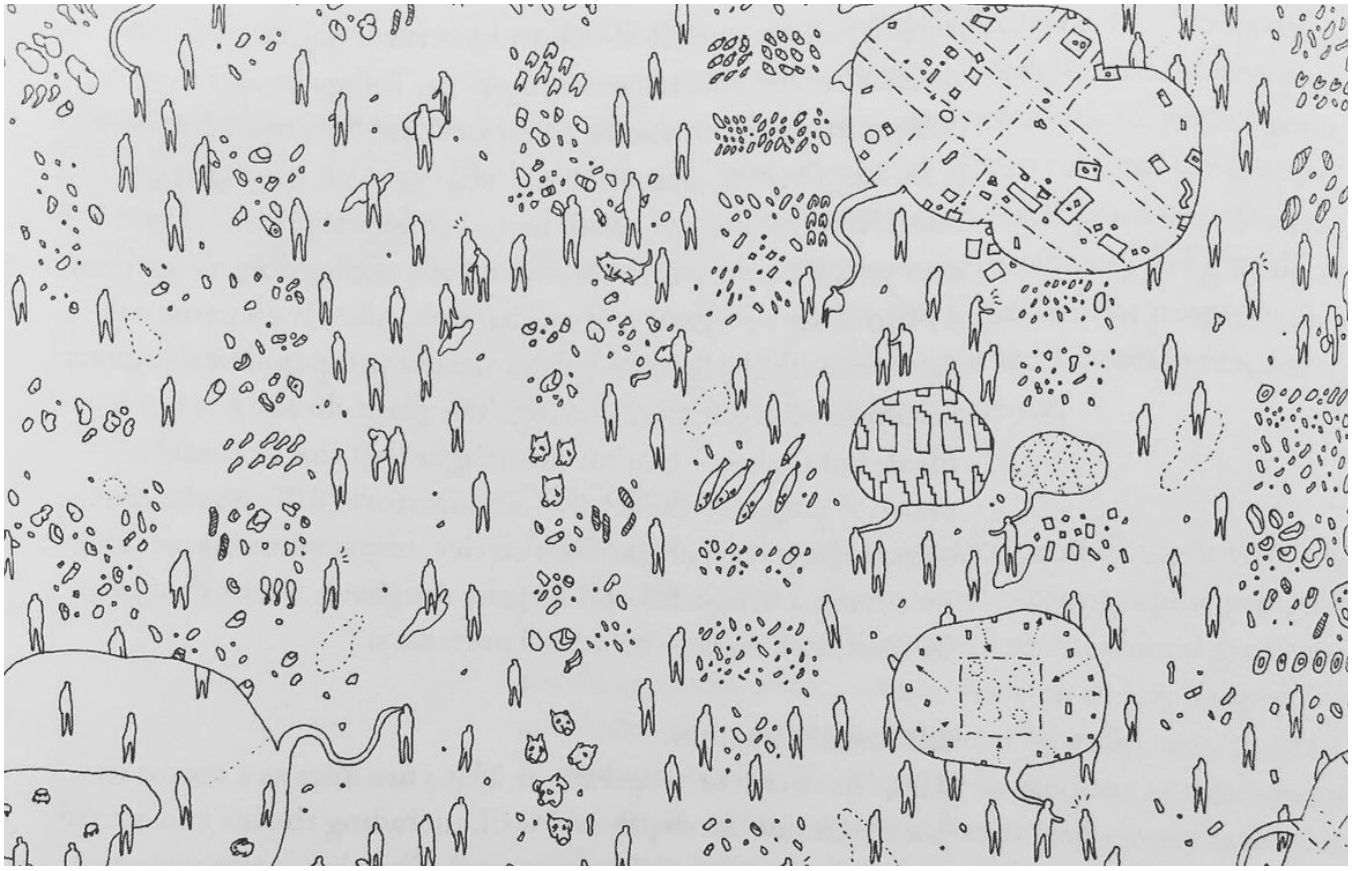

Figure 1. An example of a populated plan given by Nora Epstein Jones. Jimenez Lai, Athenian Agora without the Architecture, Athens Georgia, 2016.

building to exist as it is with myths. Fairy tales augment the functional use value of a building with literary qualities.

Narrations are sequentially connected fictional or nonfictional events that explain a building's design. Typically, the building is a protagonist in the narration, or at the very least, it provides a non-neutral setting. Narrations do not bear on the process of design, they only represent the outcome. They also help explain how a building can be occupied, highlight certain qualities of a plan, etc. Examples include MOS's filmic portrayals of life in their Ordos House, among many others. With narrations, buildings either already exist or are assumed to exist and human activity is scripted around it. This activity may be the architect's design process, or a representation of the life within the structure. Narrations take reality and reproduce it in a format that is easily followed and digestible. They unravel the complexity of a building into individual threads to be woven back together by their audience.

POPULATED PLANS

There are already good examples of constructed fairy tale architecture, like FAT's House for Essex, saturated with narrative at every level. However, for the sake of extending our analogy with diagrams, I would like to limit ourselves to the materialization of a single drawing type. In the essay "Little People Everywhere: The Populated Plan," Nora Epstein Jones identifies the emergence of a ubiquitous (in schools of architecture at least) "new" form of drawing she argues is particularly adept at conveying fiction. The populated plan looks like an architectural plan but isn't due to the inclusion of human figures. Whereas a traditional plan is strictly "architectural notation—data received from the object," a universalized geometric abstraction best suited for describing a building's organization, the human figures of a populated plan disrupt the universal and particularizes it. Other hallmarks include a ground plane stretching infinitely beyond the edges of the paper giving the sense of the drawing as a small frame of a larger field of activity. Buildings are depicted in orthographic projection but, unlike traditional plans, may be extruded into an axonometric and cut horizontally to witness the interior shenanigans. These drawings are often colorful and highly detailed, with the intricacies focused, not within the cut walls of the building, but instead between them with life and activity.

One of the primary motivations for the populated plan, according to Jones, is to "project possible futures," by explicitly tracing "the potential projection of collective and individual fantasies and events." She goes on to say, "fictions today are layered, multiple, competing, dense, and complicated, and populated

Figure 2. Film still from Playtime. Directed by Jacques Tati. Paris: Specta Films, 1967.

plans extend to these new potentialites." Jones mentions both fiction architects BS and MOS (myth maker and narrator) as authorized contributors of the drawing genre, but neglects my example of FAT. I'm going to chalk this up to personal bias. FAT made a number of populated plans in their day and the founding members continue to use the drawing type extensively in their practice. Regardless, we can all agree populated plans are good at conveying fiction, and thus they serve as a good candidate for our exercise. Identifying populated plan buildings can help uncover more features and biases of the representational practice itself, as well as identify key interrelationships between two-dimensional fiction and the built world. Will the outcome be a fairy tale or some other type of fiction/reality hybrid?

POPULATED PLAN BUILDINGS

The most immediate candidate which comes to mind to inhabit our newly formed building genre is the set for the office scene in Jaque Tati's Playtime—the one where the protagonist stumbles his way through and above a sea of cubicles.[4] This example is not perfect because it is neither a building, nor is it literally the product of a populated plan drawing—so let's call this a proto-populated plan building. In any case, the space is introduced as the camera peers over the edge of a mezzanine, hovering above an evenly dispersed grid of closed squares extruded just above head-height. Workers operate mechanically inside the space as if they are programmed, scripted only to sit or move in one of four cardinal grid directions. After the initial survey of the space, the protagonist and camera descends smoothly from above to below by way of the escalator until we are immersed in the disorienting and inhuman confines of the grid. When viewed from above, the space of ant-like figures toiling away in their individual worlds is unsettling, yet intriguing, only to become isolating and confining when experienced from within.

Another proto-populated plan building is Alison and Peter Smithson's House of the Future from 1956.[5] Again, this space is not constructed from the new drawing convention — it comes well before the first inked examples but it does enact its principles and it is not a stretch to think of it as such. Built as part of a larger exhibition, the Smithson's ideal house for twenty-five years in the future is a plastic stage set complete with living actor inhabitants. One approaches it from an elevated platform to spy upon the actors living their futuristic "lives" below, where the public is never allowed to enter. The forbidden space of the inhabitable architecture appears to be composed of a single plastic sheet molded to the needs of its users. This extensible surface is not unlike the undifferentiated ground described by Jones, or the grid module of Tati, and it provides a similar purpose of setting a stage bounded by indistinct edges.

True to the populated plan definition, these examples represent unconventional and complex relationships between fiction and reality. The Playtime set was so enormous it required an entire city's worth of resources to build and operate.[6] The economic reality of the herculean endeavor almost killed the movie. As a cost-cutting measure, the visible urban context

Figure 3. Photography of the interior bedroom with two couples in the roles as inhabitants. Allison and Peter Smithson, House of the Future. Collections at Frances Loeb Library, Harvard University Graduate School of Design.

is made from a large-scale flat image of a city. Real and fake, three-dimensions and two, come together in this cautionary tale of the inhuman side of technological progress. On the other hand, the Smithsons' fantasy house unreservedly celebrates the consequences of technology in the home only ten years earlier by scripting real people to play out a fictional life loop in an endlessly repeating theater performance. Tucked within the folds of their plastic surface are ready-to-buy products like a speakerphone alongside imagined conveniences of a possible future. These objects are seamlessly brought together to enable the blissful fictional life of a childless couple. The collapse of fiction and reality is awkward in both examples because their world-building techniques require precise but difficult-to-execute boundaries between our world and that of the populated plan.

Fast forward a few decades and OMA's McCormick Tribune Campus Center (MTCC) at IIT in Chicago is a good example of a full-fledged populated plan building. It is fitting for OMA to be first, since Jones identifies its original co-founder Elia Zenghelis' 1984 plan for Plain Sacree de Saint Gerasimos as the first instance of a populated plan drawing. Early representations of the MTCC are often taken from above with the roof removed to reveal the intense collision of programs in a "dense mosaic" on the grand "magic carpet."[7] Either consciously or unconsciously, the metaphor of the extended ground surface for arranging set pieces is also the image described by Sarah Whiting when she analyzes Mies' process for designing the original IIT campus. The graph paper game board guiding his design process became the vast grass "carpet" that hides the ruins of the demolished neighborhood swept underneath.[8] During the design phase of the student center years later, OMA's new magic carpet came a little too close to an original Mies building. Staunch preservationists defended the endangered structure until OMA included an acceptable separation between the new and the old. It seems that not all extensible ground planes are created equal.

The MTCC embraces the messy realities of urban and student life without celebrating or critiquing the technology that makes it possible, it only vivifies it within a concentrated microcosm

Figure 4. Populated plan drawing of Kitamoto square produced during a design workshop. Atelier Bow Wow, Kitamoto, Japan 2011.

of a city. However, like the Tati and Smithson's examples, it also produces a certain amount of alienation and discomfort for the real people who find their representational counterparts in the populated plan drawing. The organization is confusing (developed by tracing a plan of the city of Pompeii and extruding it. Huh?) and its failure is supplemented with a bold graphic wayfinding overlay. IIT students complain about the noise and chaos which renders it difficult to pull off many of the activities that are promised by the architecture.

Surprisingly, it seems that populated plan drawings do not necessarily ensure a more human spatial condition in their built form despite explicitly including human forms at their core. Jones herself recognizes the complicated nature of the human relations conveyed in these drawings:

> today the populated plan's narrative posits a more non-universal human subject. Little people everywhere are extremely infinitesimal figures placed in a complex field of multiple futures. What may begin as articulate and detailed, as a way of showing a multiplicity of spatial scenarios, is therefore also a very serious proposal about contemporary subjectivity. In populated plans, the little humans do not show us the measure of the building; rather, they indicate that buildings are participating in their very complicated and irreducible lives.[9]

While I'm all for revealing the complexity of the human condition, the examples so far suggest the drawing isn't very helpful at processing or detangling any of it. In fact, by promoting an architecture whose objective is holding a mirror to society, an architecture built through this process may, in fact, exacerbate the problem.

As a counterpoint, I'd like to offer a populated plan project that promotes human interaction a bit more painlessly. To find the necessary finesse to achieve this, we need to go back to Japan where diagram architecture also originated. Kitamoto Station by Atelier Bow Wow is a complex urban planning puzzle motivated by the desire to create engaging public spaces intertwined with efficient transportation infrastructure in a Tokyo suburb.[10] Atelier Bow Wow is known for their intense experimentation with architectural representation, most evident in the Graphic Anatomy book and exhibition.[11] The Kikamoto project was a five-year exploration for the firm, wrestling with the composition of buses, automobiles, pedestrians, and space. Their process was guided by populated plan sketch vignettes as well as a full scale mockup of the plaza outlined in a nearby parking lot. For a period of time, actors—motorized and not—followed a pretend script of their daily routines and animated the asphalt lot marked with only white chalk lines. All the while, the architects and city officials assessed each design iteration from an elevated platform which approximated the populated plan view.

The final built design includes traffic lanes, light poles, two flat-roofed pavilions, and a grass covered plaza subdivided by a brick grid which remains coplanar with the grass. A minimum amount of built architectural matter produces a maximum amount of meaningful human interaction.The brick grid allows for inhabitants to easily stake out territories within the large public space. When vegetable or antique markets take

Figure 5. Yoshiharu Tsukamoto explaining the participatory process prior to the design of Kikamoto Station. Fadeu UC Auditorium, May 4, 2015.

over the plaza, the module serves as readymade boundaries between vendors with their tents which fit perfectly between the brick lines.

In the end, fiction is no more perceptible in this space than any other, it is certainly not fairy tale architecture. However, during the mockup phase, roleplay was essential to previsualize the complex interaction between public codes and inhabitants. The process also resulted in a marked lack of built architecture. I don't think that was necessarily an explicit goal; Atelier Bow Wow is quite comfortable proposing bold formal interventions in other projects. I believe we are witnessing a bias inherent to the medium of the populated plan itself. It is limited in the architectural considerations it can convey and scripting human interaction does not always require a building.

I originally set out with this paper to explore how an emerging drawing type could find a happy home within a constellation of other media. My hypothesis was that including populated plan drawings as design tool would imbue the resultant buildings with the magic of fiction. It turns out populated plans are good at weaving fiction and architecture, just not the way I originally thought. In two-dimensions, including human figures within the historically desolate plan does allow architects to script life into their design process. In three-dimensional construction, the drawing may not yield the kind of humanistic space it promises. With careful planning and a holistic evaluation of the outcome, the populated plan can produce engaging social space, however. Success cannot be judged by the amount of architecture required to pull off these effects and in the end the locus of the fiction is in the projection of possible futures rather than in the expression of the construction itself.

ENDNOTES

1. *The Mind Explained,* episode 1, "Memory," accessed September 12, 2019, on *Netflix*.
2. R. E. Somol, "Dummy Text, or the Diagrammatic Basis of Contemporary Architecture," in ***The Diagrams of Architecture***, ed. M. Garcia, 88–91. Chichester, United Kindom: John Wiley & Sons Ltd. 201
3. "MVRDV 1991–2002," ***El Croquis*** 86 + 111, no. 1 (2003): 359.
4. Toyo Ito, "Diagram Architecture," *El Croquis* 77, no. 1 (1996): 18–24.
5. Stewart Hicks and Allison Newmeyer, "Myths, Fairy Tales, and Narrations," in *Possible Mediums*, ed. Kelly Bair, Kristy Balliet, Adam Fure, and Kyle Miller (New York: Actar, 2018), 170–71.
6. Charles Moore, "Architecture and Fairy Tales," in *You Have to Pay for the Public Life: Selected Essays of Charles W. Moore*, ed. Kevin Keim, 239 - 279. Cambridge: MIT Press, 2004
7. Jessica Mairs, "Grayson Perry and FAT Reveal the Elaborate Interiors of Their House for Essex," *Dezeen*, May 15, 2015, accessed October 2, 2019, www.dezeen.com.
8. Dora Epstein Jones, "Little People Everywhere: The Populated Plan," *Log*, no. 45 (Winter/Spring 2019): 59–71.
9. Sam Jacob, "Architecture Enters the Age of Post-Digital Drawing," *Metropolis*, March 21, 2017, www.metroplismag.com.
10. *Playtime*, directed by Jacques Tati (Paris: Spectra Films, 1967), ___.
11. Max Risselada and Dirk van den Heuval, eds., *Alison & Peter Smithson: From the House of the Future to a House for Today* (Rotterdam: 010 Publishers, 2004).
12. Bellos, David. Jacques Tati.UK: Random House, 2001.
13. "McCormick Tribune Campus Center, Illinois Institute of Technology, Chicago, Illinois", GA document, no. 76, November, 2003.
14. Sarah Whiting, "Bas-Relief Urbanism: Chicago's Figured Field," in *Mies in America*, ed. Phyllis Lambert (New York: Whitney Museum of American Art, 2001), 642–91.
15. Lynn Becker, "Of Mies and Rem," *Chicago Reader*, September 25, 2003, chicagoreader.com .
16. Jones, "Little People Everywhere," 71.
17. Atelier Bow Wow, "Kitamoto Station Plaza," *ARQ* 91 (December 2015): 64–69.
18. Atelier Bow Wow, *Graphic Anatomy* (Tokyo: Toto, 2007).`