Application House

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In 1994, technologist and cultural critic Stewart Brand commissioned an illustration[1] for "How Buildings Learn," showing different rates of disruption effecting architecture's component systems. This drawing, "Shearing Layers of Change," has since been adapted to model things like corporate business structures, software project management, website content, and, in an updated graphic by Brand for his current initiative, The Clock of the Long Now, human civilization itself.

This drawing type has been instrumental for Silicon Valley. Let us re-draw the smartphone in this mode. Stacked layers of material and information change at different rates. Unlike the house diagram, each layer foregrounds a distinct relationship with an economic system. Phone hardware price is usually subsidized, software applications are often free. Everything from the protective case to the user's contact list is a monetizable commodity, subject to forced obsolescence and upgrade cycles. Apps are conduits to continuously transfer information, breaking the layers' concentricity, creating tunnels from a small private interior to a broad diffuse exterior: "the moon." This scheme passes information through an almost invisible, unavoidable outer layer, recuperating exchange value from each transaction.

Application House uses this new diagram spatially, to rewrite domestic quasi-urban architecture into a full stack house of the future potentially bridging a techno-capitalist mode with fully automated luxury communism. The project takes building-scale CNC, driverless cars, drones, delivery and maintenance robots for granted, exploring their potential for spatial/social production through the act of drawing on the surface of the ground.

The urban surface is configured by the paths of these vehicles at different scales, with structures filling the space left between. Structures are defined by center points and radii of pivoting machines that deposit concrete in linear layers, shaping private space inside, social space outside. The closed contours that the machines draw are opened by apertures, each one space for an application that regulates inputs and outputs. Food, water, household goods, even thermal energy are all exchanged by means of these applications. Applications are designed so that their forms can only dock with automated vehicles in their brand ecosystem. What if Amazon gave a free front door to every Prime subscriber? What if neighborhoods could build their own networks of resources on the back of this system?

The notion of a world redrawn as loops, paths and nodes, shearing at different rates, is a starting point for speculation about possible utopian and dystopian futures. These drawings are like philosopher Donna Haraway's "sf," "… that potent material semiotic sign for the riches of speculative fabulation, speculative feminism, science fiction, science fact, science fantasy – and, I suggest, string figures."

[1] The diagram is by Donald Ryan, Brand credits the idea to British architect and RIBA President Stewart Duffy. Stewart Brand, How Buildings Learn, What Happens After They're Built. p. 13, New York, Penguin Books, 1994. Print.

[2] "In looping threads and relays of patterning, this sf practice is a model for worlding." Donna Haraway, SF: Speculative Fabulation and String Figures. p. 4, Ostfildern, Hatje Cantz, 2011. Print.
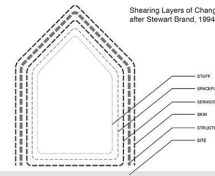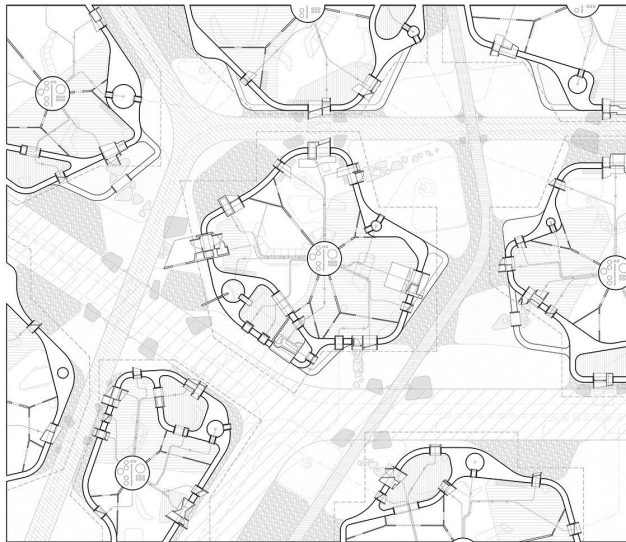
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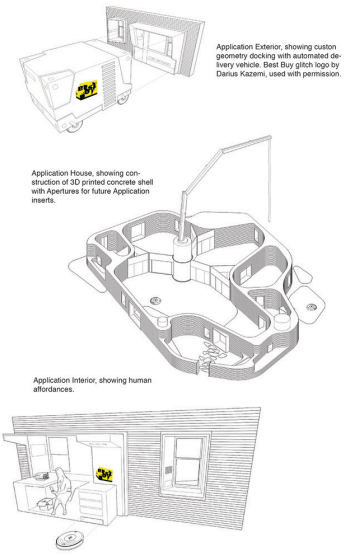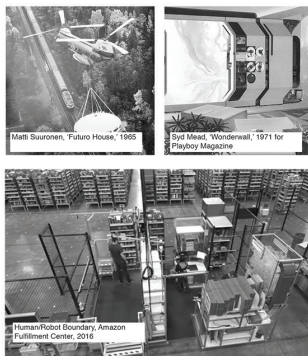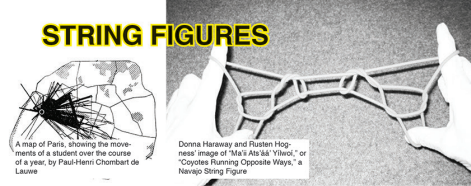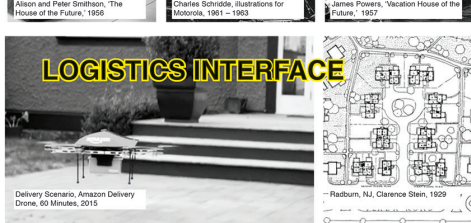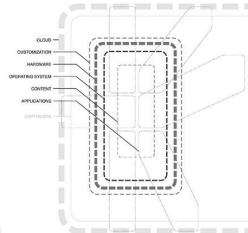**W~AS**
The Working Group
on Adaptive Systems

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Smartphone Layer Shearing
W~AS, 2016

CLOUD
CUSTOMIZATION
HARDWARE
OPERATING SYSTEM
CONTENT
APPLICATIONS

Shearing Layers of Change,
after Stewart Brand, 1994

STUFF
SPACEPLAN
SERVICES
SKIN
STRUCTURE
SITE

Application Exterior, showing custom geometry docking with automated delivery vehicle. Best Buy glitch logo by Darius Kazemi, used with permission.

Application House, showing construction of 3D printed concrete shell with Apertures for future Application inserts.

Application Interior, showing human affordances.

THE HOUSE OF THE FUTURE

Alison and Peter Smithson, 'The House of the Future,' 1956

Charles Schridde, illustrations for Motorola, 1961 – 1963

James Powers, 'Vacation House of the Future,' 1957

Matti Suuronen, 'Futuro House,' 1965

Syd Mead, 'Wonderwall,' 1971 for Playboy Magazine

LOGISTICS INTERFACE

Delivery Scenario, Amazon Delivery Drone, 60 Minutes, 2015

Radburn, NJ, Clarence Stein, 1929

Human/Robot Boundary, Amazon Fulfillment Center, 2016

STRING FIGURES

A map of Paris, showing the movements of a student over the course of a year, by Paul-Henri Chombart de Lauwe

Donna Haraway and Rusten Hogness' image of 'Ma'ii Ats'áá' Yilwoí,' or "Coyotes Running Opposite Ways," a Navajo String Figure

Johan Sölve, "Roomba Art," a long exposure photo of a robotic vacuum cleaner's movements in a dark room.

Application House uses this new diagram spatially, to rewrite domestic quasi-urban architecture into a full stack, potentially bridging a techno-capitalist mode with **fully automated luxury communism.**

Below: The urban surface is configured by the paths of robotic vehicles at different scales (1), with structures filling the space left between (2). Structures are defined by center points and radii of pivoting machines that deposit concrete in linear layers (3), shaping private space inside, social space outside (4). The closed contours that the machines draw are opened (5) by apertures (6), each one space for an application that regulates inputs and outputs (7). Food, water, household goods, even thermal energy are all exchanged by means of these applications (8).

Above: Application House is consciously part of the lineage of the House of the Future, a familiar trope in popular visual culture since the post WWII era. The project addresses that type's characteristic attributes: its legions of **vehicles** and media **gadgets**, its strange relationship to **ground** and **public space**, its **adaptable,** frefabricated components, its **nonstandard geometry**, and its production of certain **normative social subjects.**

Like the houses in Radburn, NJ existing between the circulation space for cars and humans, Application House is a Logistics Interface between different modes. Here, the house organizes the relationships between the human occupants, and the robotic modes of production, delivery, and maintenance.

Application House exists as a knot in a set of what Donna Haraway calls String Figures, The notion of a world redrawn as loops, paths and nodes, shearing at different rates, is a starting point for speculation about possible futures.

References

Stewart Brand, How Buildings Learn, What Happens After They're Built. p. 13, New York, Penguin Books, 1994.
Robert A.M. Stern and David Fishman, Paradise Planned: The Garden Suburb and the Modern City, New York, The Monacelli Press, 2013.
Guy DeBord, "Theory of the Dérive," in Situationist International Anthology, Ken Knabb, Editor and Translator, Berkeley, The Bereau of Public Secrets, 1981.
Keller Easterling, "Floor," in Elements (Publication accompanying the Elements Exhibition, 2014 Venice Biennale, Rem Koolhaas/AMO/OMA, Editors, Marsilio, 2014
Donna Haraway, SF: Speculative Fabulation and String Figures. p. 4, Ostfildern, Hatje Cantz, 2011.

The project takes **building-scale CNC, driverless cars, drones, delivery and maintenance robots** for granted, exploring their potential for spatial/social production through the act of drawing on the surface of the ground.

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1 2 3 4

5 6 7