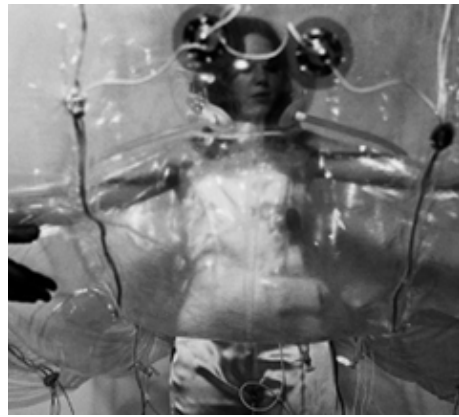




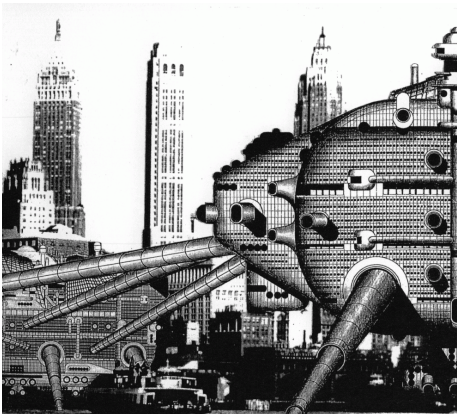
A



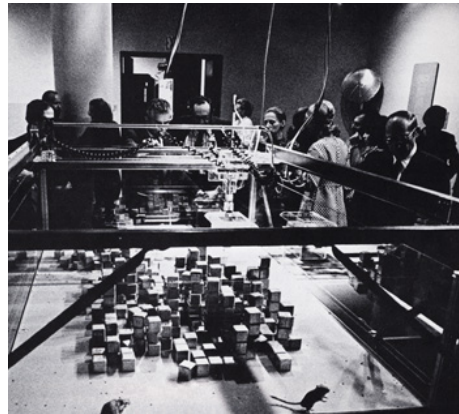
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F

# ROBOTS, CYBORGS, AND ARCHITECTURE

FALL 2019 ELECTIVE - ARCH 3308/6308 and ARCH 4408/6408

Rachel Dickey

**PREMISE.** As our bodies, buildings, and cities are being retrofitted with technology to gain dynamic intelligence and contextual awareness, how might we, as designers, provide visions of new spatial typologies and new modes of practice? The purpose of this course is to explore the space between architecture and technological paradigms specifically through the lens of the robot and the cyborg (which emerge from several overlapping dichotomies: man vs. machine, organic vs. mechanical, object vs. subject, myth vs. reality, freedom vs. restraint). This course both recognizes and critiques the fact that the current majority of architectural robotic research focuses primarily around digital fabrication and material optimization and strives to produce examples of architectural robotics and integrated technologies which are translated from human generated data and perception to form and processes, particularly as it pertains to occupation of the built environment.

**METHODOLOGY.** As part of the course, students will acquire some hands on experience with physical computing, programming, and responsive environments as well as learn from a library of historical and contemporary precedents ranging from infrastructure scale robotics to body scale architectural prosthetics. This polemic history presented through readings, lectures, and discussions will help to inform student proposals which frame a narrative response to robot cyborg paradigm in architecture. Students will work in groups to design, test, and build working prototypes of their final projects. The final project presentation format will be decided upon collectively by the class and will include an event such as a cyborg runway performance, an epic battle of the bots, etc.

**FORMAT.** Each class session will consist of lectures, discussions of readings, progress presentations from students, and hands-on technical workshops.

**PREREQUISITES.** While it is not necessary to have prior technical expertise for this course, a patience for experimentation and interest in technical systems is necessary. Exposure to scripting is a plus.

**EVALUATION** will be based on presentations, preparation for class discussions, and final projects.

**IMAGE CAPTIONS.** A) Greg Lynn, RV Prototype House 2012. B) Coop Himmelb(l)au, Heart Space-Astro Balloon, 1969. C) Diller Scofidio + Renfro, Blur: Braincoat, 2002. D) Archigram, Walking City, 1964. E) Nicholas Negroponte, SEEK, 1970. F) Haus Rucker Co, Environmental Transformer, 1968.