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Urban Chicken Coops

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WHERE DO YOU STAND

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ABSTRACT BOOK

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conditioned an intellectual shift, fueled by profits gained as companies embrace managing a world of plausibility.

Information in Architecture

For centuries architects have represented design intent through graphic and verbal communication, evolving into what is now the construction drawing. Despite changes in technology, architects' primary product is the design of information for the evaluation and construction of a building. Currently in a period of transition, the professional landscape is made up of practitioners with a wide range of computational skills. Arguably the building industry, despite having embraced computational tools has repressed new forms of representation. This minimal change over the last 40 years has allowed an architect, contractor, or tradesperson with no computational aptitude to communicate effectively. Production teams have seen increased productivity assembling, coordinating and transferring drawings between the client and contractor through the implementation of technology. The ability to reuse previous work with little or no changes provides exponential time-savings. Rather than leaving a vacuum to be absorbed by improved designs or with new clients, architects have seen increasing demands for information from the client and contractor. The efficiencies that have allowed this increase of information transfer have not been balanced between graphic and tabulated data. New technology has allowed architects to translate more information, at a higher quality, using the efficiency gains to bridge the information gap. BIM suggests a hybrid condition will emerge, as communication of information develops through traditional formats as well as through "soft architectures" based on data structure.

TEACHING COMPUTATIONAL THINKING WITH PROCESSING

Nicholas Senske, University of North Carolina at Charlotte

Why is it important for architects to be able to think like computer scientists? At first glance, the two fields might seem unrelated. After all, buildings don't appear to have much in common with software. However, some educational researchers argue that the concepts underlying computer science— as well as the problem-solving and design methods computer scientists use—are fundamental knowledge that every professional should learn. This idea is known as computational thinking .

An example of computational thinking comes from the field of biology – one of many fields transformed through the integration of algorithmic processes. Today, a biologist might study mutation rates by creating an algorithm to statistically analyze a large dataset of DNA. While computer science is not the biologist's profession, it is part of her toolkit, and its approaches help shape her thinking. The same skills and outlook can benefit architects. Procedural and information-based methods promise to shape the future of design, but only if architectural educators can find a way to introduce computational thinking.

This poster describes projects from a pilot course at the University of X with the objective of teaching students computational thinking. The course used the programming language Processing as its primary form of representation. Processing is a general, flexible language intended for artists and designers, and so it is particularly well suited as a first introduction to programming with no prerequisites . Students used the language to explore computer science topics using visual media. For example, a unit on simulation involved learning about the principal of type inheritance: using a general type to generate specific, relational subtypes. A student might investigate this idea by modeling something simple (like a school of fish), but it is a concept also found in architectural precedents and building information modeling (BIM).

The goal of the course is not to learn Processing or to generate form, but rather to learn how to think like a programmer. Understanding topics like iteration and problem decomposition are necessary in order to write programs, but these are also general design concepts that predate and exist apart from computation. Thus, computational thinking can help architects use computers better, as well as affect them even when they are not in front of one.

There is evidence that this occurred with the pilot course. In later semesters, some students reported that working with Processing helped them appreciate and utilize their conventional software better. Others mentioned that it made it easier for them to advance in other computing courses such as scripting or physical computing. Still others used what they learned to generate more sophisticated ideas within their studio projects. This suggests that introducing computational thinking early in the curriculum, in a course similar to the pilot, can be beneficial. Tools and techniques may change, but the fundamentals of computer science – which directly relate to design and computing – remain constant.

URBAN CHICKEN COOPS

Carey Clouse, Tulane University
Zachary Lamb, Tulane University

During the Fall Semester of 2010, twelve first-year architecture students with no prior agricultural or construction experience designed and built mobile chicken coops using salvaged shopping carts. Over the course of two separate work days, the teams of two students learned the basic principles and requirements of chicken coop design, developed initial design schemes, mocked-up their designs on salvaged carts, and then built coops to be donated to a local urban agriculture non-profit organization.

Why a chicken coop?

With the resurgence of the food security movement, raising chickens for household use in urban environments has become increasingly popular. Caring for chickens is relatively simple. They are ideal as urban livestock since they require relatively little space and demand little attention aside from daily feeding. They eat scraps, pick through compost, and feed on insects and worms that

naturally occur in every yard. While most hens should be released into a run during the day and only spend their nights in the cart, their droppings would collect on the ground under the cart, forming a diurnal chicken tractor.

Because hens lay nearly one egg per day, and their eggs are a great affordable source of protein, they are valuable additions to households and cities. This investment of $1.50 per bird and ongoing feeding with free scraps could produce more than 400 eggs over the course of one bird's lifetime. Eggs from locally-raised, organically-fed chickens reared on an urban house lot, vacant lot, or community garden can be sold at a premium to generate income or could be consumed as an affordable, healthy, local food.

Why a shopping cart?

Abandoned shopping carts have become ubiquitous detritus in the urban realm; littering underused parking lots, streets, and even fragile urban ecosystems. The shopping cart is given special status in the urban and suburban landscape because of its status as the ultimate vehicle of consumer culture. The cart is a part of a special class of urban material culture that is perceived to have no inherent value, but is only valuable in its enabling capacity. By separating the shopping cart from its familiar function, the CART COOP invites a wholesale re-examination of the material culture of the contemporary capitalist city.

Depending on size and modifications, each cart coop could house 1-4 chickens. As a flock grows, the farmer can simply add more carts to accommodate more hens. Their sturdy mesh sides provide protection from predators, plentiful ventilation, and positive drainage when the unit is hosed down.

The robust structure, human scale, durable materials, and ease of mobility make the shopping cart an ideal chassis on which to build a coop. While varying in both measurements and capacity, most carts share the same basic DNA in their fundamental components and shape. This standardization allows for the carts to become an adaptable modular unit for chicken coop construction; one available to any person of any means, in any city in the U.S.

WALL - PROPHYLACTIC

Mo Zell, University of Wisconsin-Milwaukee
Marc Roehrle, University of Wisconsin-Milwaukee

Walls are typical thought of as separating elements. They are divisive in nature while mediating between two didactic conditions. Sometimes the resultant is the wall, other times the wall is created to highlight these differences. Separation is easily achieved, connectivity less so. Since the time of Laugier's cave, architects, through multiple means, have explored the phenomenal eradication of the wall. Either through material continuation and/or minimizing the impact of the threshold, the distinction between one side of the wall and the other was attempted to be minimalized.

In William Shakespeare's Midsummer Night's Dream, the character Wall acts not as a separating agent but rather as a mechanism of joining. He facilitates the surreptitious courting of the two forbidden lovers Pyramus and Thisby. Rather than being divisive in nature – to sunder, Wall unites them.

This project, as does Shakespeare's Wall, challenges these divisive preconceptions of walls and inverts their spatial legibility. In today's political climate, air travel has been isolated behind veils of security. What was once a dignified luxury has now become akin to the transportation of cattle. The intention of our Wall is to allow individuals on either side of it to reconnect one last time, physically, while still preserving physical separation - security. Mobile communication technology has allowed us to connect oritorially, but we lament the loss of physical contact. This wall acts as a prophylactic that will ameliorate this physical separation.

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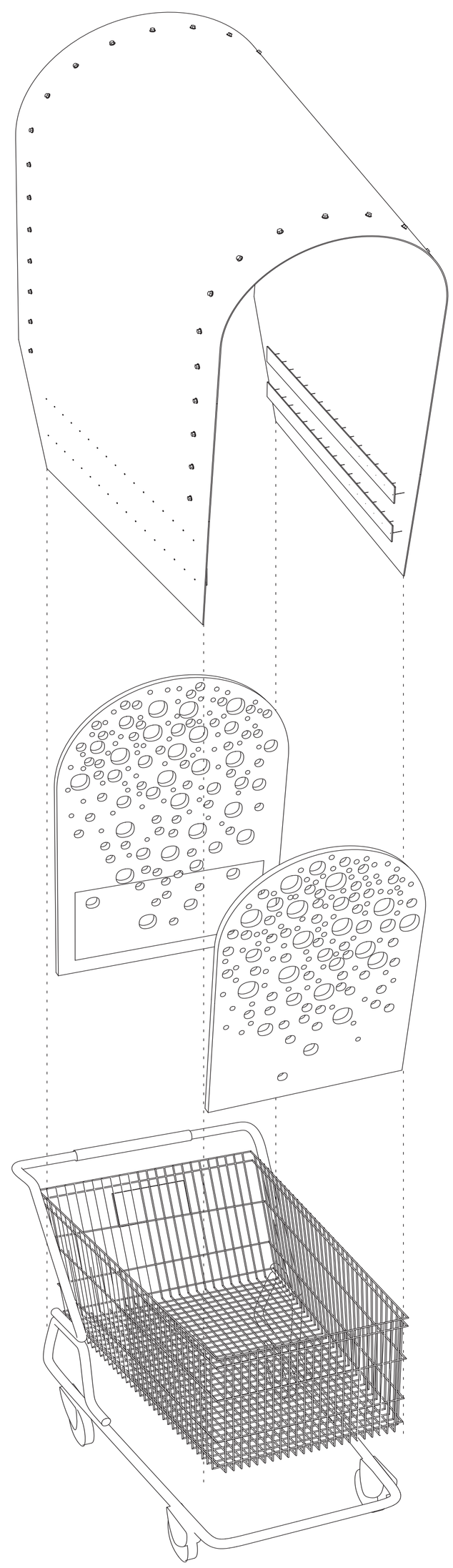
design build
+
food security
+
urban salvage



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