

BuyProduct

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Fig 1. Waste. On average each of the largest retailers on the strip studied produced 10-15 5'-0" X 3'-0" X 4'-0" bales of packaging material per week.

As an elaborate system of product delivery dispersed across the U.S. landscape, the suburban commercial strip is reviled as the anathema of urbanism, even as its popularity shows little sign of slowing. Full of contradictions (efficient but wasteful, congested but isolating) the commercial strip is ripe for a rethinking that balances its flaws and potentials. This position is arrived pragmatically, simply put: there is a lot of sprawl, and while efforts to curb sprawl and advocate for smart growth are important there is also a need to address the existing conditions of sprawl.

This paper will present design research from the *BuyProduct* studio at the Clemson University School of Architecture, the studio examined the potential of how these environments of consumption might become more fully functioning urbanisms by proposing urban strategies inspired from industrial

ecology. In industrial ecology manufacturing is approached from the point view of establishing a mutualism wherein industries collocate in order develop beneficial interdependencies. Could a typical retail strip benefit from this kind of innovation in manufacturing? The studio proposed to take advantage of the potential synergies that can be formed by uncovering the byproducts of the commercial strip and putting them to productive use by proposing a new *retail ecology* in which *byproduct* is turned into *product* creating new architectural and urban effects. Some of the "byproducts" of the commercial strip addressed by the studio include the tremendous paper waste generated by big box stores, the polluted storm water runoff from massive impervious surfaces, frequent car to pedestrian deaths, and a lack of public domain in the busy congested space of the strip.

Products

Products are the result of complex and interconnected processes that occur in time. The image of a product often belies its complexity. Timing, coordination, and process are fundamental concepts in the materialization of products and the subsequent bringing of them to market. If the studio was to propose new products there had to be a subtle and complex understanding of how the commercial strip works. The methodology of the studio was to map the underlying complexity of the commercial strip by utilizing mapping practices that document the processes of the strip as a four dimensional phenomenon, as a process that unfolds over time. This methodology shifts the mindset of the designer from a passive/reflexive idea of design to one of a design activist, speculator or

entrepreneur more capable of pinpointing a moment for action. No longer sitting on the sidelines and responding to narrowly design architecture briefs and providing a service but rather a speculator intent on fabricating new possibilities, new products.

By thinking of architecture as a product students developed strategies for the strip that took account of the complicated realities and interdependencies of contemporary culture. The studio proposed that by examining the process behind the product this consumer-scape might be remediated, recycled, and restored; shifting current practices and proposing new paradigms of architecture and urbanism.

Byproducts

Products produce Byproducts. The effects of which can be large, distant and imperceptible (the social, economic and environmental impacts to name a few) while other phenomena are readily perceptible, in the case of the physical characteristics of the typical commercial strip. Most of these effects are easily ignored because of the increasing insulation between consumer and product. But once one begins to lay bare the effects of contemporary consumption by tracking individual products the complex interdependency of contemporary culture becomes evident as well as its byproducts. In a system out of balance these byproducts go unused and are left unresolved. The charge of the studio was to strategically close the loop where it could, for architectural and urban effect, and to map these “side effects” in order to transform them and make them more productive.

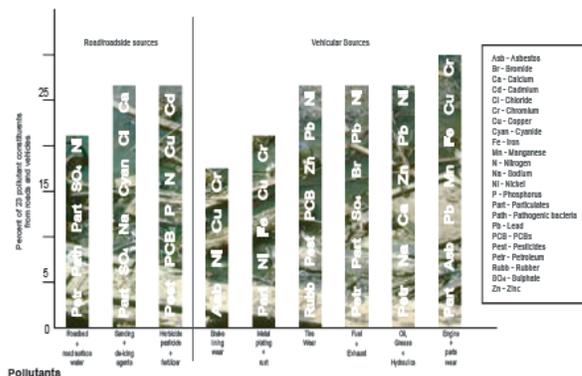


Fig 2. Pollutants from roadway infrastructure

Out of Sight Out of Mind

“This city has evolved from a community that relies upon a service economy, to one that depends on an economy driven by global business and communications technology: from a city that has evolved from local conditions, to a city that is part of a system of global city regions: and finally from a system that can be described morphologically to an entity that also must be described as a system of effects whose conditions are perceived as ephemeral” (1).

As Alex Wall suggests in his essay The Dispersed City in order to understand or make legible the contemporary city we must make use of a new set of tools and shift our mindset from looking at objects to looking at processes. An integral part of the studio’s research was the use of mapping practices that seek to document the city in time. We used dynamic media in conjunction with conventional architectural drawing to meld the relationship between the physical characteristics of the city with the fleeting dynamics of place. These new modes of observation, visualization and analysis provide opportunities to see in time and subsequently to design in time, shifting the students’ interest and proposals away from an architecture of objects to an architecture that pursues an agenda of the city as a rich field of interconnected processes.

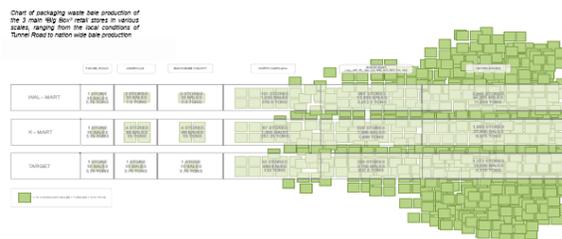
The site for the studio was Tunnel Road in Asheville NC. Like many U.S. cities its size Asheville NC (MSA pop. 378,562) is surrounded by sprawl. Asheville also has the distinction of being surrounded by the Blue Ridge Mountains as well as a reputation for being “progressive” place and home to local bookstores, coffee shops and organic food stores. But just outside the historical core of the city, lies Tunnel Road a fine example of the so called generic retail strip. In many ways Tunnel Road is the anti-Asheville a necessary evil in the minds of the city dwellers. Tunnel road is hidden away and accessible from downtown by a tunnel that neatly segregates it from the “city”. Tunnel road is home to Asheville’s malls, big box retailers, motel chains, drive thru restaurants and multiplex cinemas. Tunnel Road is where Asheville indulges a guilty pleasure; a retail landscape that is efficient and convenient and where goods are cheap and abundant. The situation

following the general pattern of its' kin elsewhere, wide feeder roads that have responded to growth over time to serve a fragmented landscape of continuous vehicular experience served up a la carte (entertainment, food, retail, etc...). While the situation is generic and uninspired, it is also distinct, dense and has a strange beauty; a commercial strip nestled into the Blue Ridge Mountains. What if we slowed down and resisted the temptation to dismiss this condition altogether? What if we thought of this retail-scape as having some redeeming qualities, some value? What if we used a different paradigm to analyze and document this phenomenon?

Duration

So, how to look at this strip anew? The studio began with a series of mapping assignments designed to make legible the less tangible aspects of place in order to overcome the inevitable preconceptions attached to place and to avoid a reading of the strip that was posited only in its readily perceived physical characteristics. In a series of mapping assignments the students were asked to dig deeper in order to lay bare the deep structure and ephemeral aspects of the landscape that they were to be working in. This was done through the accumulation of subjective data collected directly from experiences on site combined with quantitative research of how the commercial strip works. Rather than focus on the iconography of the strip the studio sought to both immerse itself in the life of the strip and the workings of the strip.

A first assignment was to live on the site for 24 hours. Living on the strip proposed a durational mapping and range of experiences that the students were unaccustomed to. Students "lived" on the site for a day in order to establish a fine grain mapping of the place through direct experience. The strip as habitat subsequently reframed their experiences and allowed students to indulge in the experiences the strip had to offer. This durational mapping is a technique that reveals to the student a richness of place that is generally missed in the preconceptions of that often accompany place.



analog of ecology they would be able to propose alterations to the system and produce a more positive outcome and close some of *loops* in the system. This work follows directly from the logic of industrial ecology the stated mission of being to "...promote industrial ecology as a way of finding innovative solutions to complicated environmental problems, and facilitates communication among scientists, engineers, policymakers, managers and advocates who are interested in how environmental concerns and economic activities can be better integrated." (2). Could the students tactically re-engineer aspects of the strip to be more effective economically while confronting the urban and architectural ills of this type of growth? Could the strip act as architectural and urban incubator for testing new ideas?

Re-Made in Asheville Two Proposals

The two projects to follow are representative of these two directions in the studio. On the one hand were projects that directly addressed the infrastructure of the strip and sought to promote products that served as public/private joint venture that would improve the physical environment of the strip while benefiting the public and commerce producing a performative experience. In a second category were projects that identified raw materials or physical products produced by retailers and sought to transform them into new products or experiences. All of the projects share an approach that sought to produce a synergy between the economics of the strip while producing remedies for its numerous negative impacts on the surroundings and the city of Asheville.



Fig 4. Waste=Product. A mobile shredder travels from store to store along the strip so as not to duplicate machinery.

Waste=Product Peyton Shumate

ByProduct

Paper waste generated by big box retailers along the commercial strip

Product

An on site recycling/manufacturing boutique that transforms the paper waste into a one room mountain cabin made from the recycled paper pulp.

This project follows most closely ideas from industrial ecology. In this proposal the student proposes on site recycling to capture a waste product at its source (paper) with an onsite manufacturing plant that turns paper into product. A "green" designer good is produced that extends the life of the material and replaces non sustainable product in the Asheville area (a small weekend mountain cabin).

Big box retailers are notorious for the large amounts of packaging waste produced at their stores. On average the large retailers (Target, Wal-Mart etc...) on Tunnel Road each produce (10-15) 5'-0" X 3'-0" X 4'-0" bales of packaging material per week. These materials are the boxes and other paper goods used in the delivery and storage of goods. Recycling for all of its good continues to be problematic because of the inherent inefficiencies of centralized recycling plants, and the expense of htransportation, pollution and extensive water and energy use. Current recycling programs are slowing environmental degradation and might be doing as much harm as good according to William McDonough (3). If this waste were to be reconsidered as raw material and recycling occurred on site the problems of disposing or recycling off site could be dealt with in a more effective way, saving time and energy while producing a more compelling shopping experience. One in which recycling and manufacturing are combined to produce a useful product consumer sees waste turned into product.

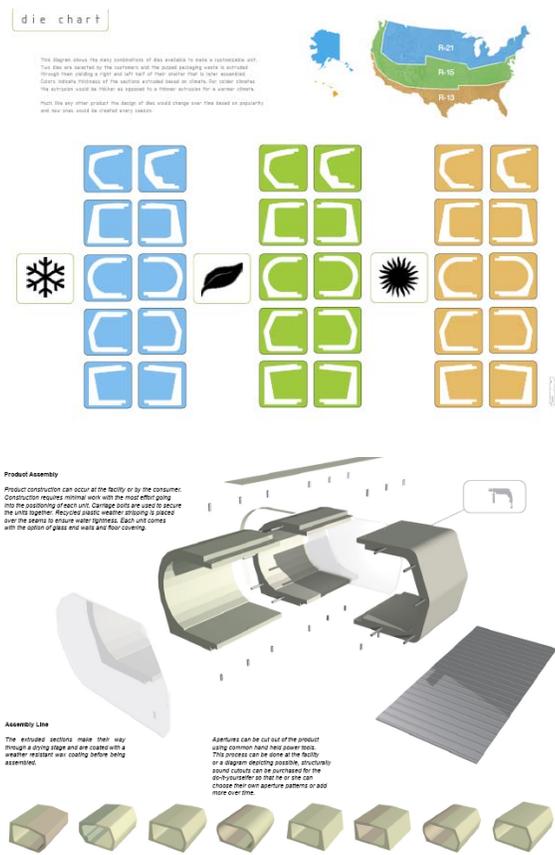


Fig 5. Different sections can be produced from dies that are designed for different regions and other preferences.

In a mapping exercise early in the project the student revealed the incremental monumentality of the amount of waste produced by retailers. These maps track both the enormous waste produced as well as the problems with conventional recycling methods. The proposal targets these conditions by proposing a dispersed retail manufacturing process wherein green manufacturing becomes a niche area in the retail establishment. The new manufacturing/sales facility is connected to the big box retailer as a kind of boutique. Consumers can see the waste leaving the store and transformed into new products. In this case a small weekend cabin extruded from the paper pulp that uses soy based adhesive and is waterproofed with a wax finish.

The manufacturing process is designed to be flexible and adaptable. With a series of modules that can be swapped out over time to meet the need of a fickle consumer in terms of

design while the underlying manufacturing platform remains the same. Extrusion dies form complete wall sections that can be varied regionally and seasonally to insure the product line is sensitive to local markets and changes with consumer preference.

The student attempts as a design entrepreneur to form a hybridized practice of manufacturing, industrial design and manufacturing into a hybridized entity that works directly with retailers to propose a design conscience approach to issues surrounding solid waste.

Transit Hives Mike Stopka

Byproduct

The convenience and efficiency of vehicular circulation has produced an auto-centric landscape that is isolating and dangerous to pedestrians and bicyclists.

Product

Transit hives addresses this side effect of transit and circulation by proposing "Transit Hives" a proposal for Asheville Transit Authority (ATA) to create pedestrian safe zones in conjunction with the ATA's bus shelters in an effort to improve ridership through an identity program as well as improve the outdoor spaces along the strip. The project proposes to give the city dweller more choices in transit, safer crossings along the commercial strip and a public domain in which the strips primary demographic can "hive".

Another consequence of sprawl is the well documented issues surrounding transit choices and the problems that have arisen from ad hoc transportation strategies in generally following growth. The condition along Tunnel Road in Asheville is not unique in the U.S. in its auto based transit, lack of space for pedestrians, and bicyclists as well as a dysfunctional bus system demonstrate. Could these byproducts of the strip be thought of as an opportunity? Could the speed of movement, density and congestion be retooled to produce a compelling outcome in terms of transit and public space? This project addresses the social and transportation issues of the strip by seizing upon these problems as potentials.

By looking at the strip more carefully and mapping the strip using digital video and

producing 4d documentation of the spaces this student was able to target moments in time to act. These maps promote the virtues of the strip as defined through motion, light, and activity. The student produced a series of 4d maps that document the interplay between these ephemera on the site. By mapping the intensity of use with a time based methodology the student was able to see the possibility of orchestrating activity on the strip in relation to the time use patterns.

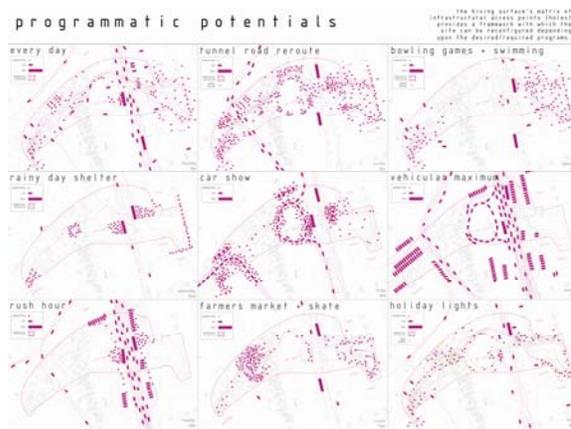


Fig 6. Programmatic potential, different programmatic configurations of the hiving surface.

The proposal focuses on an emerging cultural trend of *hiving*. Hiving represents a renewed interest by certain segments or “niches” of the population to hive or connect with others in public spaces. These demographics also matched the targeted demographic on the part of the ATA for increased ridership as well as an attractive demographic for the retailers. The vehicle for this hiving is then was transit. There are two main hiving demographic groups: baby boomers and generation x. More and more, as these groups age, family is becoming a key component of their lives. Secondary hiving demographics include: youths looking for gathering spots, empty nesters and the elderly largely excluded from societal activities.

The resulting proposal “Transit Hives” is a proposal for the Asheville Transit Authority to increase ridership, through a reexamination of the transit hubs and stations in the greater Asheville region. The project asks whether it is

possible to leverage the moribund urbanism of this densely packed strip wherein there is rarely a significant exchange between the occupants into a vital transit oriented public domain by expanding the program of the transit stop into an urban event space wherein programmatic scenarios can be specialized and optimized to be attractive to the numerous niche populations that currently use the strip. The new transit spaces are conceived of as “transit hives” that act as attractors and that operate provisionally within the existing suburban context to draw together an existing heterogenous fabric of distinct retail and entertainment programming to a create more significant and layered urban scenarios, while providing safe and compelling spaces for drivers and pedestrians.



Fig 7. Play Hive. The movement of the strip is intensified through the hives while each hive takes on a “niche” program.

Conclusion

Recent initiatives in addressing sprawl by the design community have concentrated on curtailing growth outward and infilling urban cores. While both are important a third condition exists in which little attention is being paid, those communities that actually live in and use sprawl on a daily basis. The BuyProduct studio specialized in operating in territories somewhat overlooked by the design professions and taking up Alex Wall’s call for the invention of a practice of remediating the existing and the in between. It is the contention of the studio that this *terrain vague*

a massive grey field that is ripe for innovation in the remedial sense. The lives here alternating from isolation to brief moments of vitality usually in the context of consumption are at the cusp of what might be called an urban scenario and are in need of the innovation that designers can provide. In addition there are many *unseen* environmental and social problems that benefit a broader constituency to attend to (pollution, obesity, destruction of wildlife habitat). Attempting to work in the wake of sprawl, the studio saw the city as a more contiguous and interdependent phenomenon. Rather than rejecting suburban an exurban environments out of hand the studio attempted to remedy this problematic relationship and to patch the rift between.

Endnotes

¹ Alex Wall , "The Dispersed City," in Jonathan Woodroffe, Dominic Papa and Ian MacBurne, ed. *The Periphery*, Architectural Design Vol. 64 No. 3/4 (The Academy Group Ltd) pp. 8-11.

² The International Society for Industry Ecology, <http://www.is4ie.org/> , 2006.

³ William McDonough Michael Braungart, *Cradle to Cradle: Remaking the Way We Make Things*, (New York,: North Point Press, 2002).

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