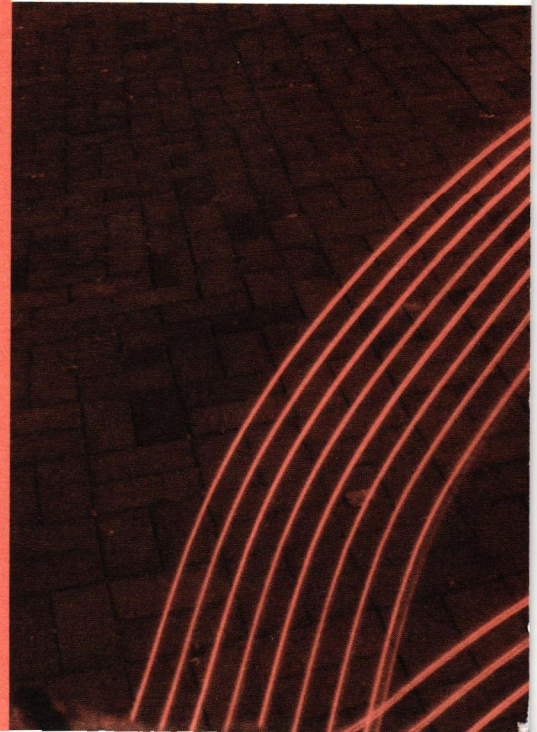


NC STATE UNIVERSITY



# Collective intelligence, *collaborative design...*

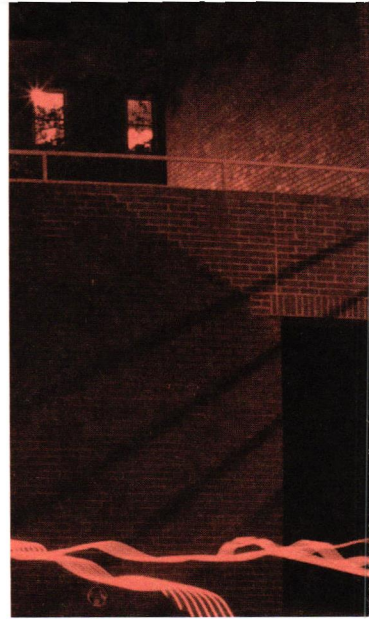
THE STUDENT PUBLICATION OF THE COLLEGE OF DESIGN VOLUME 33





While a romantic notion of the sole creative spirit lingers in the consciousness of the design professions, the increasing interdependence and interrelatedness of decision-making has never been more apparent. Just as we are linked by environmental patterns, we are also increasingly global in our means of living and working. New information technologies and growing digital currency among people of all ages present us with significant opportunities. The sharing of information across national boundaries, cultural bias and economic means implies inclusivity that is a powerful tool. Today we connect practitioners across continents without much concern for the social, cultural and environmental implications. New forms of communication have promulgated work and lifestyles that are amazingly cross-cultural but also encourage behaviors that define transformed sustainable work habits. Yet this new technology has also worked to provide forms of relationships hitherto unknown in the evolution of society. We are truly on the verge of a society founded on collective intelligence with repercussions we can only imagine. We are evolving away from traditional organizations to virtual networks of work. Social networks of work are combining with the socialization of technology to lower the threshold of involvement of individuals and groups into decision processes. It is inevitable that new organizations will emerge from this process.

Further it is important to recognize that we are moving toward the productive interaction of new forms of technology and software operating strategies removing human interaction from the most



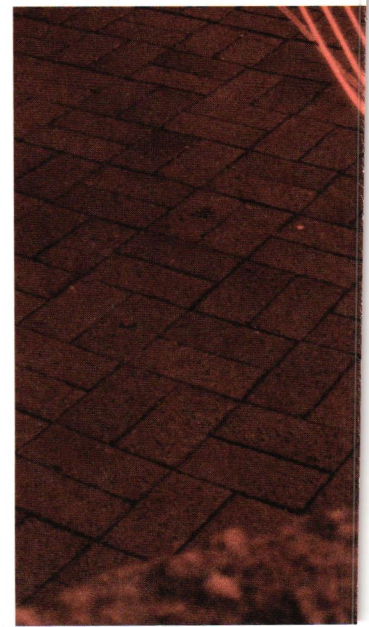
## What effect does this new social/technology How can we use this to best aff

rudimentary decision tasks. Not since the textile production revolution, provoked by the introduction of new looms that set us off onto the path of the computer, have we experienced the dichotomy of abilities among individuals on a design team. It is possible for us to be perfectly comfortable with a sophisticated level of technological adoption and yet be clueless about the nature of this transformation. We can be acolytes and Luddites simultaneously. It almost goes without saying that the interaction of technology will become more sophisticated with time demanding more of human interactions in order to provide the discipline and framework for interaction and action. Collaboration is therefore defined as much by machine interaction as human interaction. Some would recognize this as a form of the productive autonomy of machines.

This will influence decision processes and it therefore cannot be ignored as we evolve our thought processes with the aid of new media.

It is our imagination that is needed at this moment to act as the guiding light for such advances. How will it do so? What effect does this new social/technological network have on the challenge before us? How can we use this to best affect future prospects for our design professions?

We are in a period of time when we have begun to be aware again of the importance of a broad base of knowledge and enrollment in the design endeavor. New technologies have reopened our eyes to the possibility of collective intelligence. The democratization of information enhances the possibilities of collaboration and we have therefore become much more aggressive about collaborations. This as the foundation for new patterns of collaboration is the essence of what is explored in this publication.







network have on the challenge before us?  
future prospects for our design professions?

**Marvin J. Malecha, FAIA**

Dean, North Carolina State University | College of Design





For me, the discussion of participatory culture started in the fall of 2007, when my graduate class hosted the Option Shift Control graduate design symposium. Our class of twelve spent months talking, debating, questioning and mapping participatory culture and what it meant for designers. We defined participatory culture and co-creation as the current trajectory toward collaborative work methods, collaborative content creation and the often shifting of control from maker to user. These behaviors and trends can be seen in the debate over DIY (design it yourself), RSS feeds, tagging, blogging, social networking and book self-publishing sites, just to name a few. What implications does all of this have for designers? And for users? When is it appropriate to co-create? How does/will co-creation with non-designers affect the outcome? Are designers going to be forced out of work by novices?—surely not!

In *New Futurism*, the last student publication, the majority of images used were pulled from Flickr.com, a social networking site that allows users to upload hundreds of photos, comment on others' photos, and create collaborative photo pools utilizing tagging. Whether or not this use of Flickr.com photos was an intentional strategy by the design team to comment on participatory culture, it is a bold example of how collectives and collaboration are affecting our everyday design practices. An example of the potential shifting of control can be seen in *The New York Times* recent practice of using photos from the site to accompany articles. A friend of mine took it upon herself to contact a Flickr member whose work was used by *The New York Times*. The photographer had no idea that his work was

## What implications does all of this have for designers?

Marty Maxwell Lane,  
editor

being used, but to my surprise he was not angry. He was curious and happy that his work was viewed at an international scale. This shift of control is fascinating—why was he not angry with possible ownership issues? And what is the perception of participants about their roles as contributors?

Just as *New Futurism* looked forward, I am optimistic about the direction in which participatory culture is leading us. The idea that a strong collective project may be more important than the individual credit is a very new idea in the design world—and it will be challenged by the very foundation of individualism upon which much of design was built. Several of the following articles question the value of the individual versus the collective, both in education and in design.

After the symposium, I had more questions than answers and still do. This publication is an extension of that discussion in which we hope you, the reader, will participate. This Volume has been curated, edited and designed in the spirit of co-creation. We encourage you to take the book apart, re-order it, write in it, engage with it—take time and enjoy it. Whether you are led to answers or to more questions, we hope this issue of the Student Publication encourages you to think about where you sit in the larger participatory culture.



# CO-CREATION

Do users need to know they are contributing to be co-creators?

**03: Culture probes**, Option Shift Control Symposium

Does customization provide empowerment?

**05: Simple for beginners, Rich for Aficionados**,  
Sean Durham, Commentary by Rebecca Tegtmeier

What is the future of collaboration?

**11: Bodies of Interference, What if Design Were a Virus?**,  
Kelly Cunningham

How are designers responding to collaborative culture?

**17: Five Behaviors of Participatory Culture  
and What They Mean for Design**, Jamie Gray



*Impressions, thoughts... (even gut reactions*

# Culture probes

KELLY CUNNINGHAM

Throughout this publication, you will see a selection of the responses gathered from culture probes during the Fall 2007 Graphic Design graduate symposium, Option Shift Control: Collaboration and Co-creation by Design.

The attendees were graduate students, faculty and design professionals.

During the graduate student symposium, Valentina Miosuro and I created three packages to circulate among the attendees. The research and presentations completed for the symposium responded to the topic of design collaboration and co-creation in an age of audience empowerment. Collaborative exercises designed to collect feedback from the symposium participants at the event were a natural fit.

In the tradition of Dr. William Gaver's<sup>1</sup> culture probes,<sup>2</sup> plastic envelopes containing a camera, journal, pen, flash drive and a conversation piece like a toy, were circulated during the event with associated questions or prompts.



The intent of the packages was not to collect quantitative information or to gauge specific reactions for analysis. Cultures probes, in Gaver's view are inspirational tools that expose interesting connections among ideas and guide design for the probe audience. Looking at the returned comments, drawings and enclosed items in our probes, we gained insight into how the audience responded to our presentations. In most cases, culture probes usually inform designing, but in this case they were part of an end result. The audience feedback we received was useful in reflecting on the symposium and how the participants responded. Ideally, this could also inspire future projects for this same audience.

The packages were themed; each contained a question for reflection and response. In the journals, varying types of visual cues elicited different types of feedback. Lines for writing, short lines for lists and open spaces for sketching were added to the short journals to allow each respondent to select the type of entry they wished to make. This decision was made to appeal to multiple types of author. The probes acted both as a collection device for responses to the symposium theme of co-creation and collaboration, and as a co-created artifacts.

The responses provided playful insight into the thoughts and musings of the participants who added entries.

#### NOTES

1. Dr. William Gaver is a Professor of Interaction Research at the Royal College of Art in London.

2. Dunne, Anthony and William Gaver, et al. The Presence Project. London, UK: Computer Related Design Research Studio, 2001.

*Kelly Cunningham is a recent graduate of the NC State College of Design Master of Graphic Design Program. Kelly's thesis project, WearToWork, focused on assisting low-income women in obtaining living-wage employment through an online training system.*





# Simple for beginners, rich for aficionados

How Starbucks' drink framework and ordering language engage customers at all levels

SEAN DURHAM

Like Starbucks, other companies are offering customization options to their customers. Makers of the Mini Cooper provide a variety of choices to their customers. Each can create his or her own unique automobile, all from a controlled range of options. Most manufacturers offer custom products on demand versus the mass production of a standard product. Many companies market and sell this idea as a customer experience, even though it is a well thought out business model of the post modernization era. The drink framework is Starbucks' version of a business-model that is marketed to customers as an experience; this clever model fulfills two needs for the brand; first, to make a profit and, second, to keep customers loyal.

Designers not only bring form to objects, they design systems and services that provide conditions for users to create their own experience. It is important how the system functions as well as how the user perceives it.

Starbucks has grown to be a worldwide brand with over 15,000 locations. Its extra-ordinary success is often attributed to providing a high-quality **customer experience**.

An important aspect of the Starbucks experience is the ability to customize drink orders. In order to support a **high degree of customization**, Starbucks has created a deep and flexible framework, and a language for describing the framework and progressively introducing it to customers.

This article examines the Starbucks drink framework and the language that describes it.


Starbucks has carefully planned its **customer's journey**. Its menu offers a first time visitor a relatively small set of options, which means ordering for the first-time can be very simple.

But customers familiar with the drink framework can specify drinks not explicitly on the menu, creating literally millions of options.

WITH ANNOTATED  
COMMENTARY  
BY REBECCA TEGTMEYER

Several people begin their day with the Starbucks customer experience. What makes it an experience? It's the soothing music, coffee aroma, smiling faces, relaxed people lounging in chairs, warm lighting; all created for a customer experience and the purchase of coffee products. The experience varies from person to person, visit to visit. It may be the underlying motivation behind choosing to visit a Starbucks over running into a gas station for a daily caffeine fix.





Sean Durham is an interaction designer at Dubberly Design Office in San Francisco.

Rebecca Tegtmeier is a second year candidate of the NC State College of Design, Master of Graphic Design Program.

Who knew your visits to Starbucks were planned journeys and that you face so many options even if you order the same beverage?

Are options really adding to the customer experience? Are endless options helping customers make a decision quicker? Does it really make them feel in control?

The Starbucks menu options are built on a complex framework, offering 14 dimensions along which customers can make choices to “design” their own drink. Beginners see little of the framework, but Starbucks has set up a process for teaching it—and for having customers teach each other.

The Starbucks drink framework invites participation and exploration. Learning the language creates a sense of empowerment and belonging. It helps customers feel they are part of Starbucks.

Here’s how the Starbucks drink framework is organized.

### *starbucks’ drink framework*

Starbucks’ drink offerings can be divided into four categories: Espresso drinks, Drip coffee, Frappuccinos, and Tea drinks. Espresso drinks use shots of espresso as a base to build on. Drip coffee is common coffee, hot water percolated through ground coffee beans. Frappuccino is a proprietary word for Starbucks’ blended, dessert-like coffee drinks. Tea drinks range from traditional tea bags in hot water to iced tea mixed with lemonade and other fruit juices.

Espresso drinks can be divided further into four sub-categories: Espresso, Latte, Cappuccino, and Americano. Espresso shots served alone comprise the first subcategory. The Latte is a drink composed of a number of espresso shots mixed with steamed milk, topped with frothed milk foam. The Cappuccino is like a Latte, but with less milk and more foam. The Americano is composed of espresso shots and hot water rather than milk.

The Latte is the basis of most drinks on Starbucks’ menu. The main difference between most Latte drinks is simply the choice of flavored syrup. Others differ by being served over ice rather than hot.

### *learning the language*

**With so many options,** how many variations are possible? With only one syrup the Starbucks’ Latte framework offers almost 200 million variations. Add a second syrup and there are over 1.3 billion—enough for each Chinese citizen to have his or her own personal drink.

Starbucks and other companies are getting the most from the current desire to participate, design, or build custom t-shirts, beverages, automobiles, and even online social networks. Customers are asking for more control in how they spend their money and in the choices they are faced with daily, so why not let them “design” their own drink? What about those customers that don’t want to “design” their own drink for fear of wasting money on a beverage they end up not liking or they just don’t want to be bothered with making decisions when ordering a drink?



The background of the page is a grid of Starbucks coffee cups, each with a printed order form. The order form includes checkboxes for 'Tall', 'Grande', 'Venti', and 'Double', and a 'Customize' section with checkboxes for 'Milk', 'Syrup', and 'Whipped Cream'. The Starbucks logo is visible on the side of each cup.

Exploration of the drinks does come with a price. If one chooses to explore, their sense of participation can be rewarding if they end up “designing” a drink they actually like. The framework encourages a customer to explore the range of options, resulting in repeat visits and brand loyalty. If one chooses not to explore the options offered, the Starbucks framework satisfies the passive customer by offering fixed items.

Learning process? For the customer or the barista? What happens when this game of telephone goes bad? Does the customer interject the repetition game to make a correction? Perhaps this is why an order for a “tall Latte for Marty” turns into a “tall cappuccino for Mary.”

How do customers cope with so many options? Consider this story: A new customer enters a Starbucks store. She stands in line behind another customer and hears him order: “I’ll have a Grande Non-fat Latte.” The barista taking his order repeats the order “Grande Non-fat Latte.” When the drink is ready another barista calls out the drink again “Grande Non-fat Latte.”

The new customer has heard **the language—barista-speak**. She may realize from hearing the other customer that the size of the drink comes first in the order and that she can ask for “non-fat” as an option. When it is her turn to order, she can call on prior knowledge of coffee drinks, ask the barista to help her decide, or look to the **menu for some ideas**. When she orders, the barista clarifies the order and repeats it back. When the order is ready another barista calls out the order again.

Each order is repeated three times. Repetition supports the learning process. Over time, the customer learns new options from the baristas, from other customers and from her friends. She may learn barista-speak and the underlying framework for designing drinks, but not all at once.

Customers learn at the pace they set for themselves. The drink framework and language offer an easy way for those unaware of the system to order without difficulty. The system’s full complexity waits for customers to discover it.

**The process of learning** barista-speak is a carefully designed journey. New customers may have no concept of the drink framework or ordering language but that does not prevent them from ordering. They can order from the menu or get guidance from the barista.

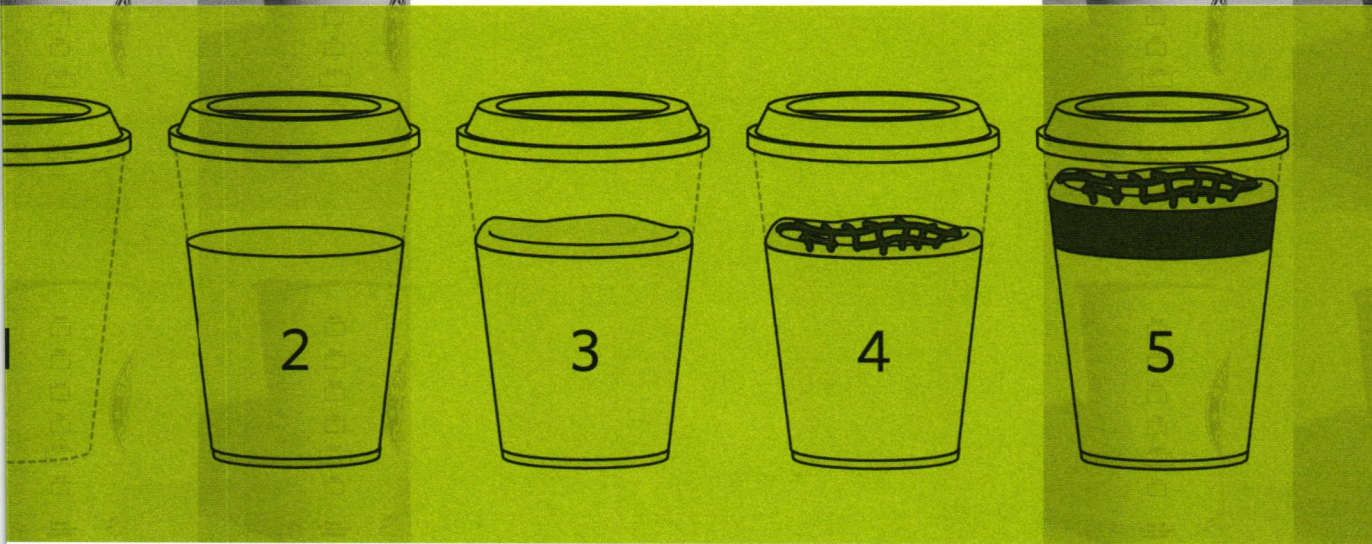
Customers may begin to customize drink orders after learning new options through promotions, by hearing other customers, and by sharing drink preferences with friends. Upon recognizing the language, customers may begin to seek out new options and experiment with new variations. Experienced customers may suggest new variations to friends and teach the language to beginners.

#### *why does it matter?*

Learning the language gives the **customer more control—** the power to order a drink precisely to preference. It also

The idea of “learning the language” seems common in the realm of certain frameworks, such as online social networking. Take Facebook as an example. Newcomers to Facebook learn the language of the system through trial and error. Their “friends” in Facebook help them learn the way. Once one becomes familiar with how the system works, their sense of belonging becomes established.





*“With only one syrup the Starbucks’ Latte framework offers almost 200 million variations.”*

DIAGRAM CREATED BY SEAN DURHAM

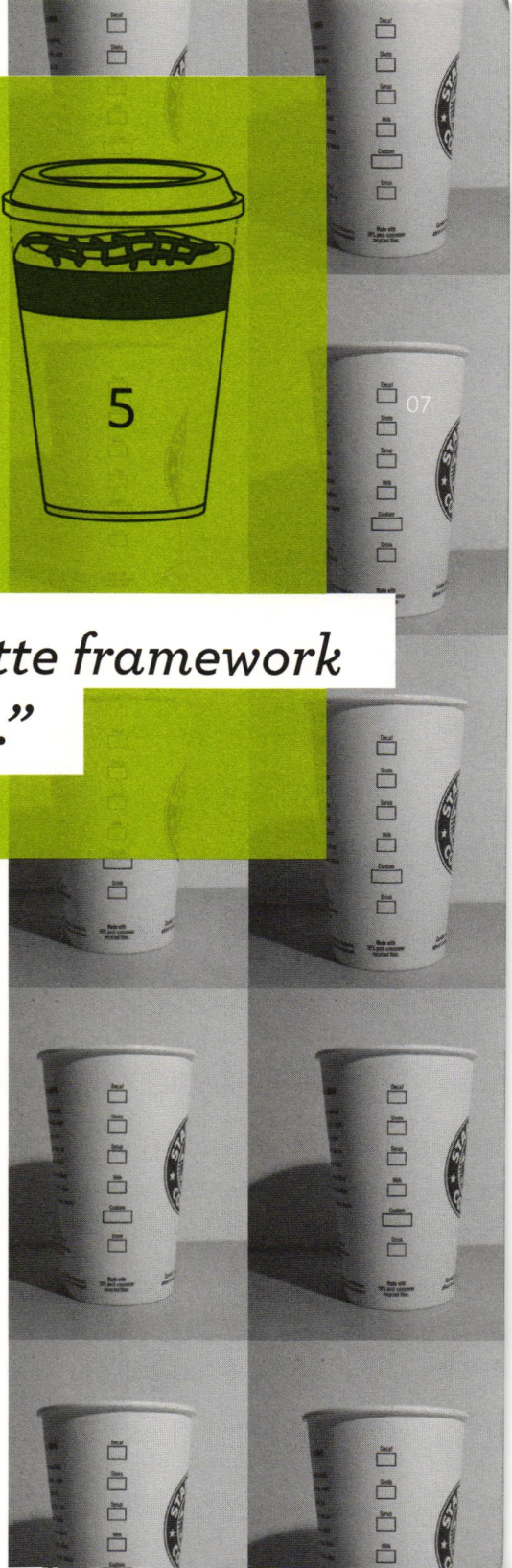
*“I find myself customizing many of the things I purchase—adding stickers, painting, icons, typing on yarn or thread—whatever I can add to really make it mine. I feel compelled to mark it off, to permanently alter it, so it’s forever changed.”*

participant from Option Shift Control symposium culture probes

creates a sense of belonging—of having insider knowledge and status. Empowerment and belonging make customers feel that they are a part of Starbucks. They encourage repeated visits and build loyalty.

Frameworks are important tools for systems design. Starbucks provides a sophisticated example of framework design. The Starbucks example also provides important lessons on product language design and shows how progressive disclosure and unfolding complexity can support co-creation of products and services.

These lessons can be applied to many other interaction design and service design problems.





Impressions, thoughts... (even gut reactions):

## Culture probes

What is the designer's role in @

To provide insight and functional

To encourage and motivate



# comments.

collaboration?  
tools



# bodies of *i n t*

MUTATING AS IT PASS



SED FROM PERSON TO



ALL IMAGES AND ILLUSTRATIONS  
IN THIS ARTICLE WERE CREATED  
BY KELLY CUNNINGHAM  
FOR A PRESENTATION IN THE  
OPTION SHIFT CONTROL SYMPOSIUM.





# e r f e r e n c e

## *What if Design Were a Virus?*

*What if,*

*in the future,*

KELLY CUNNINGHAM

*in urban mainstream society,  
the replicate is privileged,  
the original dismissed, destroyed, and denied.*

*A hyperreality exists  
where perfection is modeled on the unattainable.  
To borrow from Baudrillard,  
it is a society of total theater.*

*Things that can be duplicated  
are preferred over those that are singular in nature.  
Repeatability gets the holder, the wearer, the clone, the consumer, the user  
one step closer to the immortal.  
Most gestures are symmetrical.  
Most beauty is mirrored.  
Twins are sacred.*

*In this future,  
clothing takes the form  
of full body biosuits.  
The suits monitor basic body functions  
and communicate information to the wearer.  
On the biosuits, patterns are displayed for aesthetic variation.  
Sensors in the fabric reveal images.  
Digital patterns are infinitely repeatable.  
They reinforce the embedded cultural concept of the sacred multiple,  
with no original.  
Non-repeating sequences are considered flawed.*

*Kelly Cunningham is a recent graduate of the NC State College of Design Master of Graphic Design Program. Kelly's thesis project, WearToWork, focused on assisting low-income women in obtaining living-wage employment through an online training system.*



*Wearers select designs in the virtual realm.  
Fashion has become these patterns;  
wearers clamor for the season's releases.*

*In this society there is a subculture, the rejectionists.  
They are the cult of the lost object.  
They seek the original, the source,  
the beginning in a series of second-order signifieds.  
In a world of hyperreal, this is a fruitless task  
but one that fosters desire for the unattainable.  
The rejectionists are urbanites  
who live in the midst of city life, but hold values  
other than the dominant.  
They are not welcome and secretive.  
Notions of individuality from bygone epochs are resurrected.  
However,  
the concept of the original is contextualized by their own time.  
It is an age of genetic control and machined perfection.*

*Rejectionists value mutation  
and perpetuate it in various ways,  
like bioluminescent tattoos.  
They subvert common language with subtle shifts  
and create code viruses*

*what if..*





in the future

to change the patterns on their biosuits.  
 Patterns with disruptions in them  
 are uploaded and traded  
 when two rejectionists are in close proximity.  
 A communication signal is sent,  
 a pressure point on the left wrist heats up,  
 and a hand gesture confirms the transmission  
 of the data.  
 Patterns traded by rejectionists  
 mutate every time they are exchanged.  
 They are programmed to change—  
 to always be an original.

This future may sound distant,  
 but as we stand on the edge of a merged world,  
 digital and lived-space,  
 nano-suits and metamaterials,  
 are we not on a path to hyperreality  
 or already there?

Design lives in both of these spaces,  
 in the replicated ephemera  
 and the precarious singular creation.  
 What if design were a virus  
 mutating as it is passed from person to person?

Instead of setting the norm for the mass production  
 of the same objects and ideas,  
 design could be a catalyst for change,  
 progression and metamorphosis.

What if?



Impressions, thoughts...(even gut reactions):

## Culture probes

...[unclear] culture has all  
to me but is important in fact  
in the real world as well as in

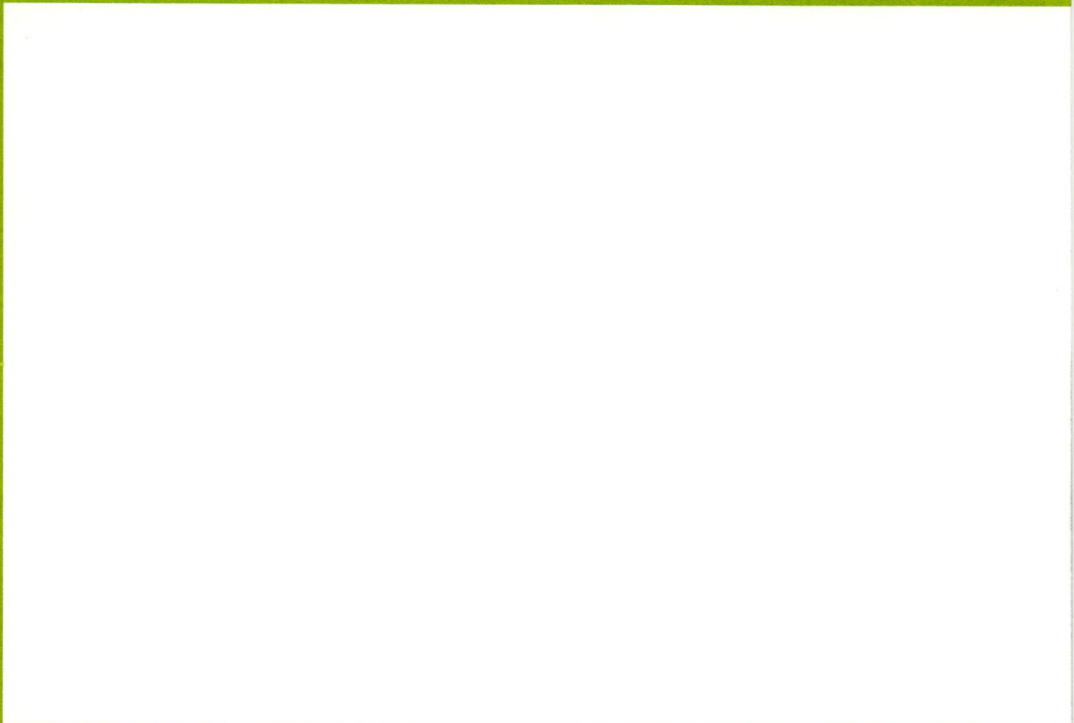
I feel compelled to part  
create/co-author with

given the chance  
observe what others  
doing, and to be



ideas.

ate  
ever  
see  
ne  
upon

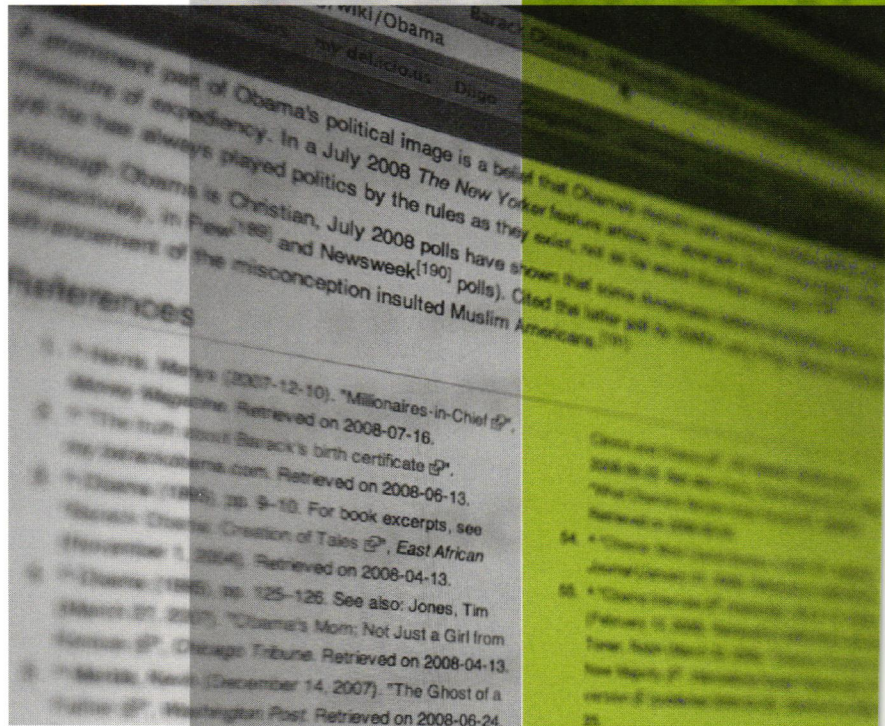




# FIVE BEHAVIORS OF PARTICIPATORY ***What They Mean for Design***

Jamie Gray is a 2006 graduate of the NC State College of Design, Master of Graphic Design Program. Her graduate work focused upon speculative design possibilities for "digital collecting" behaviors. Since 2007 Jamie has been an Assistant Professor in the graphic design department at Kansas City Art Institute where she continues to research and teach about design at the intersection of emerging technologies and culture.

JAMIE GRAY



Barack Obama - Wikipedia

my delicious

Obama's political image is a belief that Obama's features allow for a more...  
measure of expediency. In a July 2008 *The New Yorker* feature article, he wrote that Obama...  
yet he has always played politics by the rules as they exist, not as he would like them to be.<sup>[19]</sup>

Although Obama is Christian, July 2008 polls have shown that some Americans believe he is...  
respectively, in Pew<sup>[198]</sup> and Newsweek<sup>[190]</sup> polls). Cited the latter poll as "Obama's...  
affirmation of the misconception insulted Muslim Americans."<sup>[19]</sup>

REFERENCES

1. "Obama, Kenya (2007-12-10). "Millionaires-in-Chief", *Money Magazine*. Retrieved on 2008-07-16.
2. "The truth about Barack's birth certificate". <http://barackobama.com>. Retrieved on 2008-06-13.
3. "Obama (1983), pp. 9-10. For book excerpts, see Barack Obama, *Creation of Tales*, *East African* (November 1, 2004). Retrieved on 2008-04-13.
4. "Obama (1985), pp. 125-126. See also: Jones, Tim (March 27, 2007). "Obama's Mom: Not Just a Girl from Hawaii". *Chicago Tribune*. Retrieved on 2008-04-13.
5. "Obama, Kenya (December 14, 2007). "The Ghost of a Father". *Washington Post*. Retrieved on 2008-06-24.

54. "Obama's political image is a belief that Obama's features allow for a more...  
55. "Obama's political image is a belief that Obama's features allow for a more...  
25



# CULTURE &

In the 1980's the advent of the personal computer gave rise to desktop publishing. Suddenly many had access to the tools of media creation and distribution. Some decried the death of standards and professionalism, but as we now know, that didn't happen.

The new technology adopted by designers initiated a heightened sense of creative freedom, authorship and advancement within the profession.

Two decades and a dot-com crash later, creative control shifts again from a few with technical expertise to anyone with the means and desire to produce content. This led to exponential growth of the democratization of media creation. Again, some designers worry about crude outcomes, but others remain optimistic that the rise of participation will **push the design profession to new heights.**

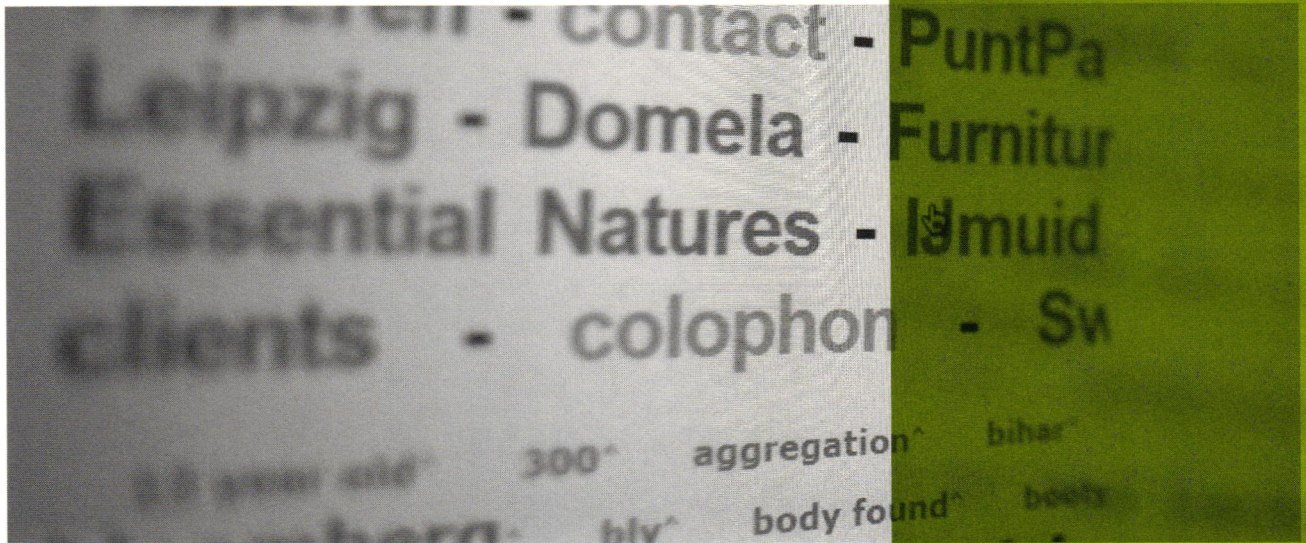
In 2005, new media publisher Tim O'Reilly coined the term "Web 2.0" and defined what has become an altered state-of-mind for how we work and play online. In this phase, publishing becomes participation, documents become dialogs and hierarchical directories become chaotic clouds of subjective contexts.<sup>1</sup>

Enter the era of participatory culture. This sea change moves us away from traditional means of media intake

*"Co-creation is the future of design. Designers co-creating with users."*

participant from Option  
Shift Control symposium  
culture probes





and creation as well as mutates the very premise of consumption. In this upload and download society, producers and consumers of content merge into a single hybridized entity, or what techno-critic Kevin Kelly aptly coins the “prosumer.”

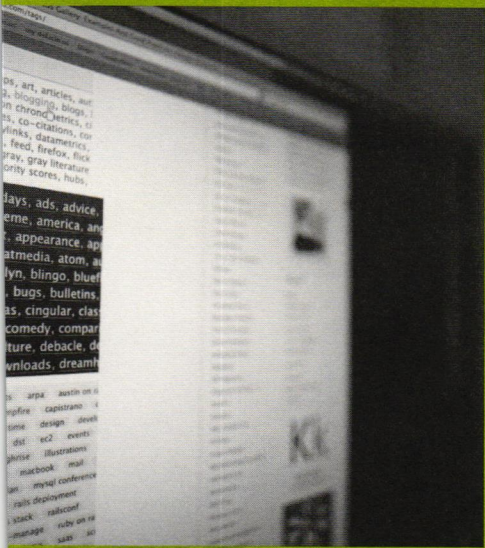
As a result of almost ubiquitous broadband access, easy-to-use co-creation tools and key open source technologies, user-centered control is no longer a monologue. Rather, it is a symbiotic back-and-forth of permalinks and tags, comments and trackbacks, RSS and mash-ups. All adding up to one massive, collective dialog.

Participatory culture, while not exclusive to digital spaces, is certainly made more powerful through the technologies that enable specific user behaviors. These behaviors—linking, publishing, tagging, collaboration and customization—are lifelines to vast social networks and an expanding online knowledge base. Countless browser-based applications integral to participatory culture (e.g. Blogger, Flickr, Del.icio.us, Facebook, YouTube and Wikipedia) substantiate these actions. These social networks

The use of Wikipedia as a credible source for academic writing is a debate surrounding collective databases. Do you trust it? How do you know if the collective source is as strong as an “approved authority?” The connotative significance of an Internet-based source versus a printed-based one may also weaken the argument for web-based collectives. We trust the printed word. The references feature of Wikipedia is something that starts to address peoples concerns about web-based collectives. The collective footnotes tell you who has added what to the entry and to some, that inspires confidence in the content.

Marty Maxwell Lane





and many others plot to various points on the sharing continuum, allowing users of all types—from active leaders to passive players—to be a part of the conversation.

### *publishing*

Collectively, the contributors to **Wikipedia** have agreed to define participatory culture as “the production or creation of some type of published media.” And while the authority of such sources can be debated, their synergistic opinions can’t be ignored. Traditionally, people have always sought forums through which to document thoughts and archive their lives. Now, rather than locked in diaries or published in biographies, our lives can be streamed through dynamic media for instant public impact. Additionally, the ability to edit, reuse and remix existing content begets wholly new personal narratives and global dialogs.

Other modes of publishing now exist in more subtle forms, allowing users to track and document daily minutiae, without even realizing their contribution to the nascent database. The premise of producing analog content that can be translated to online display now shifts to creating

content solely to live online. Whether users are tracking music listening habits on Last.fm, micro-blogging on Twitter or recording business relationships on LinkedIn, a vibrant form of life publishing is taking place.

### *linking*

Hypertext—the foundation to Tim Berners-Lee’s world wide web—renders the most rudimentary form of online publishing nearly invisible. Every click increases a page’s rank for search engines. Enough clicks and it rises to the forefront of public exchange. The web offers an “architecture of participation that encourages users to add value to the application as they use it,” regardless of conscious input.<sup>2</sup>

With the surfeit of content online, users must find inroads to personal relevance and expression. Discussion threads take on new life as they interlace and compound into other posts. In the end, you can “build your own narrative around text you found elsewhere” with blog posts and social bookmarks.<sup>3</sup> Since bloggers tend to be self-referential, the simple power of online publishing has a ripple effect on the discourse, one that resonates inward as much as outward.

### *tagging*

At its core, tagging is an idiosyncratic classification and search system based upon user-generated keywords that it eliminates the need for files to reside in single locations. When aggregated, tags harness a community’s will to organize and give meaning to the content of the web. The words are visualized in a “tag cloud” of fluctuating typographic hierarchy and the most resonating of which enlarge to become symbols of established entry points, and have the potential to fulfill a future user’s search criteria. As this “folksonomy” (a collaborative categorization system that is determined by online users) evolves from online interfaces to operating systems—or as the content of our hard drives migrates online—how we interact with data may render the traditional hierarchy a fossil.

### *collaboration*

A behavioral offshoot of both publishing and tagging, is the web ability to harness the power of collective intelligence in ways previously unseen. The earliest and still relevant example is amazon.com’s user reviews.



Amazon chose a self-sustaining model based upon customer participation, which is now a hardy industry standard and has spawned similar rating systems and bottom-up viral promotion strategies all over the web. One Web 2.0 manifestation is Digg.com, which allows users to rate stories; those that receive the most “diggings” rise to the top of the homepage.

Wikis are another example of the collective’s ability to write, modify and police their own information. An idea that was ridiculed now has legitimacy that cannot be denied as the output and approval of wikis, an expansive online community, embraces user-review systems and blogs and often seeps into mainstream media.

#### *customization*

What has become obvious through all of this is that people want the power to control their own image and voice. Whether it’s through the obsessive, visual mayhem found on MySpace, or the power to define one’s own information architecture on Facebook, the opportunity to create, remix and mutate data is inherent to participatory culture.

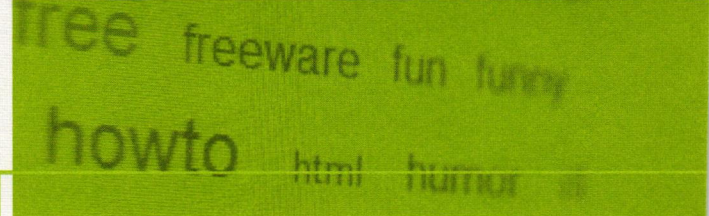
**Customization** is a manifestation of the technology that empowers it. When intuitive interfaces have operational “skill[s] embedded,” the learning curve is at its most minimal and thus accommodates the widest gradient from the tech savvy to the casual novice.<sup>4</sup> Browser-based applications are now standard in WYSIWYG (what you see is what you get) formats that activate the creative power of users. Ajax’s scripting capabilities and the proliferation of CSS (cascading style sheets) standards to separate content from presentation empowers participatory culture in a fully customizable world. Computer Science Professor

Gerhard Fischer’s request that design be accessible to all interested people and not just “to a small group of high-tech scribes” is realized.

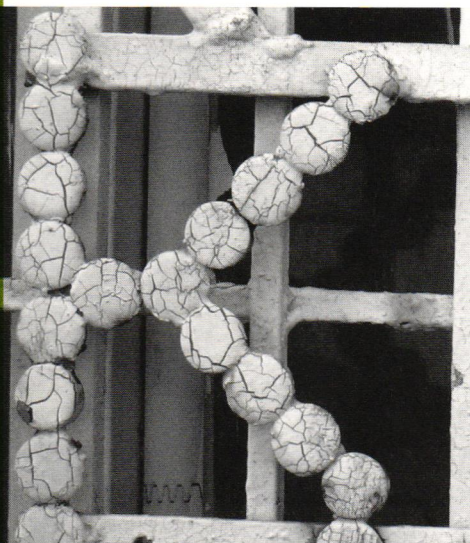
*What does this customizable-tagged-published-linked-collaboration (aka participatory culture) mean for media creation and design professionals?*

It is clear we no longer play by the same rules, and although the designer’s jurisdiction appears to be slipping away, the interactive director of the NYTimes.com contends “what we’re interpreting as a loss of control is really a multiplicity of states.”<sup>5</sup> This requires more design, not less.

Technologies continue to offer designers the ability to finesse screen-based content with higher fidelity, and at the same time, such tools have been transferred to the hands of the end-user. With access to simple, smart frameworks people willingly become co-creators (and are getting good at it, too). A decade ago design researcher Liz Sanders correctly predicted that “when given the means to express







*"Customization comes down to any choice you make—the minute I choose Band-Aid over Curad I have customized my life. I do have concerns over the number of choices available to me. While I love to pick different things, I am not sure how much the opportunity is improving my life—I waste time deciding and money by upgrading. How can designers combine the efficiency and economy while maintaining freedom of choice?"*

participant from Option Shift Control symposium culture probes

themselves, [people] can be both articulate and creative"; she called for designers to reach beyond information visualization to satisfy those desires.

Because of the paradigm shift toward an increasingly participatory culture, designers must evolve from creators of products, or sole shapers of content, into experts of functionality, flexible platforms and systems that encourage participatory behaviors and evolve over time. Facebook user's crave an application that offers them total content control and the ability to impact content arrangement while the brand's heralded aesthetic keeps the chaos at bay and allows members to focus on what they have to say. Mastery of form and meaning will not cease, but the new prerequisites for Web 2.0 (and 3.0) include designing scalable interfaces for customization, malleability, viral distribution and unpredictability.

The good news for designers is that this appeal to participate is an opportunity to satisfy the user's desire for guidance and clarity by providing people with a means of creation in order to seamlessly dialog and participate in online culture. Now, that's a juicy design problem!

Spell with Flickr, a web site that allows the user to create words using images from collective Flickr.com photo pools  
<http://metaatem.net/words/>

This essay was written on a MacBook Pro with Google Doc's browser-based editing program.

#### ALL CITATIONS COME FROM ONLINE RESOURCES

1. Tim O'Reilly's *What Is Web 2.0* on [oreilly.com](http://oreilly.com)
2. Wikipedia
3. Khoi Vinh's AIGA presentation *Control* on [designconference2007.aiga.org](http://designconference2007.aiga.org)
4. Virginia Postrel's *Your Design Here* on [printmag.com](http://printmag.com)
5. Khoi Vinh's AIGA presentation *Control* on [designconference2007.aiga.org](http://designconference2007.aiga.org)

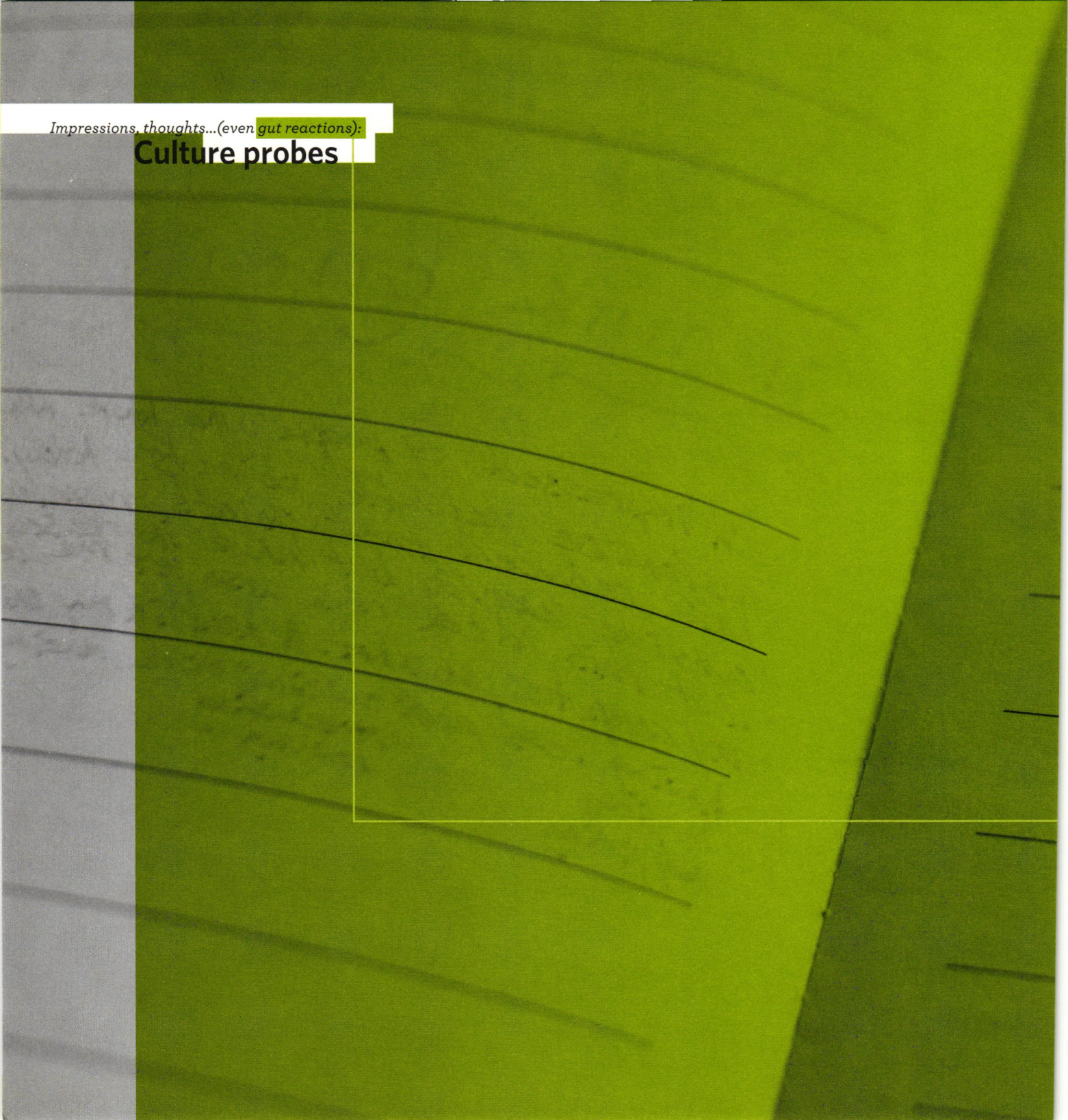
#### ADDITIONAL RESOURCES

Kevin Kelly's *New Rules for the New Economy* on [kk.org](http://kk.org), Gerhard Fischer's *Beyond "Couch Potatoes"* on [firstmonday.org](http://firstmonday.org), Liz Sander's *Post-design and Participatory Culture* on [maketools.com](http://maketools.com), Matt Veilla's *Facebook's Big Facelift* on [businessweek.com](http://businessweek.com) and Ric Greffe's *2015: A Design Odyssey* on [designtaxi.com](http://designtaxi.com)



*Impressions, thoughts... (even gut reactions):*

## **Culture probes**





reactions.



What are the characteristics of “meaningful” co-creation?



# collaboration

How can student collaboration change education?

**05: Interactive Video Tools that Inspire Active Learning,**  
Gretchen Caldwell Rinnert

Should we resist collaboration and co-creation?

**13: Debunking the Myth, *How Online Technologies***  
*Challenge the "Cult of the Design Star,"* Deborah Littlejohn



Impressions, thoughts... (even gut reactions):

## Culture probes

Is collaboration necessary for the advancement of knowledge in the discipline?

At what point does collaboration reach its pinnacle in terms and instead, result in a compromise?

Is collaboration necessary in every discipline?



benefit,  
costs

come as  
to collabora  
ambo (ind  
of com

# conclusions.



educational participatory communities

# *Interactive video tools that inspire learning*

GRETCHEN CALDWELL RINNERT

*Gretchen Rinnert is an Assistant Professor in the School of Visual Communication Design at Kent State University. At Kent State she teaches interactive media, and motion graphics. She is a recent graduate of the NC State College of Design, Master of Graphic Design Program. As a graduate student her work focused on the intersection of design and education, specifically digital video tools that aid students in classroom participation.*

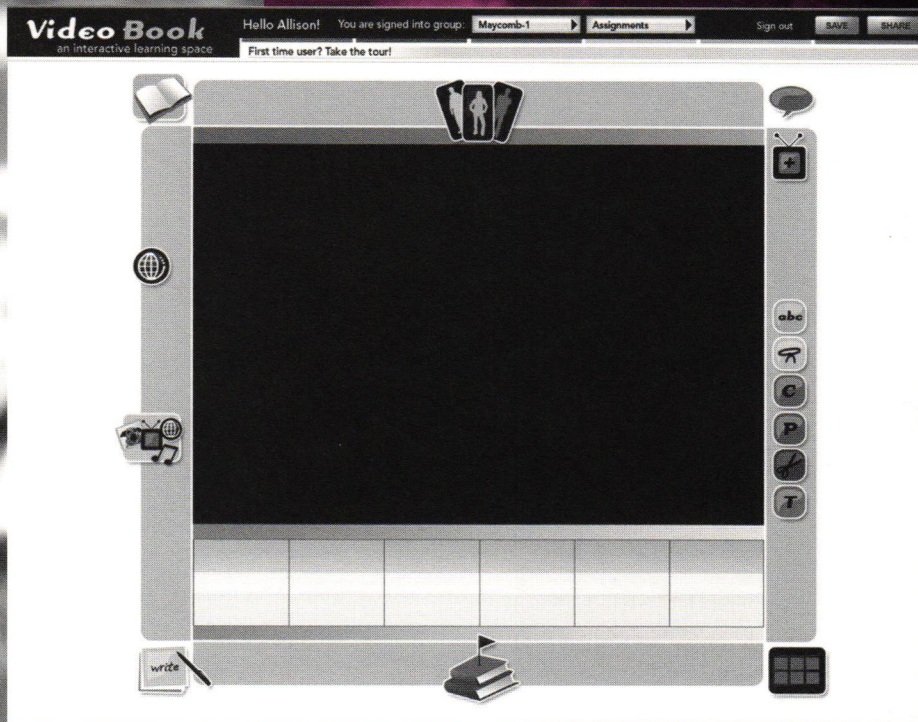


Fig. 1  
ALL IMAGES AND ILLUSTRATIONS IN THIS ARTICLE WERE CREATED BY GRETCHEN CALDWELL RINNERT FOR HER GRADUATE FINAL PROJECT.



I recently visited a middle school classroom. It was very similar to the one I attended as a student in the early 90's. Harsh fluorescent lights made the room feel hollow and uninviting. Over-zealous motivational posters were fixed permanently to the walls.

*"Participatory culture has allure to me but it is important to participate in the REAL world as well as virtual."*

participant from Option Shift Control symposium culture probes

Desks were arranged in rows with colorful short plastic chairs. When the teacher presented to the class, I was transported to 1991. I remember being a middle school girl, embarrassed and awkward. When called upon, I usually froze. I spent the better part of the seventh grade hiding behind the tall boy who sat in front of me. I dreaded the moment I had to speak. I have found in my conversations with friends and in this research, that this perception was not mine alone. Many adolescent girls are unable to participate in classroom activities.

Several studies and investigations confirm that middle school girls between eleven and fourteen years of age go through a significant change. The unhappiness and depression these girls face affect their behavior in the classroom. They struggle to find a voice during their adolescent years, often remaining quiet, disengaged and isolated from classroom activities. This is commonly referred to as "learning-resistant behavior." Middle school is a critical time; if students get behind in school they may not regain their educational footing, which affects the rest of their lives. Through adolescence, girls must continue to be active within their learning community to ensure their continued success in school activities.

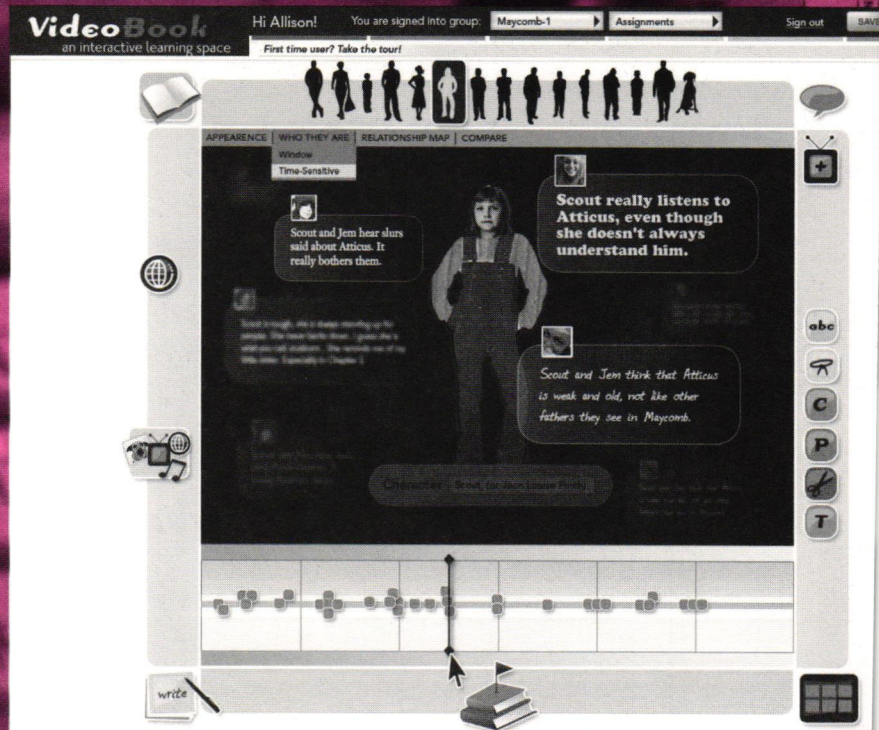
#### *research*

A solution to student's lack of engagement may lie in the current trends in online popular culture. Over the past years, web sites have emerged that support participation among people all over the world. These digital communities offer tools, interaction, and an organizational structure that support rich and meaningful communication. Such communities function as participatory cultures.

They suggest a possible model for educational institutions to develop more formal learning communities.



Fig. 2



Henry Jenkins defines a participatory culture as “a community that has relatively low barriers to artistic expression and civic engagement; strong support for creating and sharing; some type of mentoring occurs between expert and novice members; all members are convinced that what they contribute will be valued by the group; and there is a degree of social connection with the other members.”<sup>1</sup> There are four types of participatory cultures; affiliations, circulations, problem-solving communities and expressive communities.<sup>2</sup> These enigmatic communities value collaboration, creativity and a sense of experimentation.

It is important to consider how people prefer to learn. Psychology Professor David Kolb and learning theorist Bernice McCarthy developed theories that illustrate the widespread differences in human preferences for ways of learning. Kolb theorized that there are two dimensions of learning, how we perceive and how we process information.<sup>3</sup> Kolb and McCarthy’s observations led to the articulation of four different learner types. Each learner type has specific preferences for how he/she accesses and processes information. People can cross categories, and

even change their learning preferences over time or in response to specific learning tasks. My research reflects on those theories.

Participatory communities train young people to be media literate by exercising specific skills.<sup>4</sup> The skills also act as learning strategies that engage the different ways in which people prefer to learn. By exercising these skills we engage the various learning preferences. Jenkins proposes that a new type of literacy be addressed in schools, what he refers to as media literacy. He describes media literacy as “preparing youth to develop the skills, knowledge, ethical comprehension, and confidence to engage with contemporary media.”<sup>5</sup> The specific skills that develop media literacy are play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, and negotiation.<sup>6</sup>

#### *design*

In response to the growing needs of adolescent female students and my research, I developed an interactive



O KILL A MOCKINGBIRD  
KILL A MOCKINGBIRD  
KILL A MOCKINGBIRD

Fig. 3



Fig. 4



video system that is an educational participatory community for middle school students. Video Book is a component-based, web application to be used by multiple users. A web application by definition exists online and allows users to complete tasks together in an online environment. Unlike traditional software applications, web applications usually do not require users to pay for access. They are open source and do not require a site license to run the application. A few examples of include Yahoo Mail or Google Docs. The Video Book interface design supports direct correspondence between students and educators. All participants can save, share, and delete their work.

07

The prototype demonstrates four scenarios that represent how students work through distinct clusters of components. By using certain components students can complete a diverse set of tasks and create various digital learning objects. Scenarios follow Allison, a seventh grader, as she works with her group in Video Book to complete homework assignments.

#### scenario one

In scenario one, (see figure 2) Allison builds a character from the book *To Kill a Mockingbird*. Allison begins by building the appearance of Scout, the main character in the novel. She selects her facial appearance and clothing, visualizing the physical attributes of the character. As she moves her mouse over the character she is invited to select a face from a given set of actors. The student matches the image of the character to the description in the actual novel. The student saves the representation into the class database. This capability allows the students to practice collective intelligence as each student can contribute notes and ideas about a character to the whole group. Each student has access to the character database and can use the collection in building storyboards and making movies. The analysis can change over time and is recorded by the system. As students focus on building a character, they emphasize on the relationships between characters and story structure.

#### scenario two

Scenario two begins with Allison working with her group members to storyboard chapter ten from *To Kill a Mockingbird* (see figure 3). The students gather actors from the



character bank and compose them by visualizing the key moments in the chapter. The interactions taking place in scenario two emphasize meaningful play, as students reveal the intricacies of the plot as they collaborate. The teacher is able to view individual participation and quickly sees if students comprehend the novel and its literary themes and devices. Storyboarding allows students to view the narrative in a concrete, chronological way and to share their mental pictures with one another.

#### *scenario three*

In scenario three Allison and her group compile research for an informational report on the Civil Rights Movement. This scenario reflects their progress as they work through the ideation and brainstorming phase (see figure 4). Using the media link tool students attach media content from the Internet and from their group gallery. They make connections among related movies, images, text and audio. They also edit out what they find to be inappropriate, making judgments and negotiating what the group feels is relevant to their topic. The tools act as framing devices through which students view content.

#### *scenario four*

Scenario four shows Video Book working as more than as a simple interface, but as a formal system within a community (see figure 5). Allison works independently, developing an informational video report, incorporating video, photos, graphics, audio and text-based information. She imports her own recordings. Her amateur movie demonstrates, not only what she has learned about Rosa Parks, but also reveals her creative and expressive talents. It allows her to perform by sharing her movies with her group members, her teachers, and ultimately her entire class. This exercise encourages Allison to become an author, building her confidence, as she shares work within a safe learning space.

The design of Video Book transforms students into designers. Through the process of group works the students exercise interpersonal skills.<sup>7</sup> Video Book allows users to work together to edit, compose and share their digital explorations. Movie viewing and making address a high level of literacy, as Marshall McLuhan once theorized in his book *Understanding Media*.<sup>8</sup> By giving the students access to tools for making and sharing videos they not

Fig. 5







only learn to be highly literate, but they also learn to tell stories and speak through words and moving images. “[Movies] convey a great deal of information. In an instant it presents a scene of landscape with figures that would require several pages of prose to describe.”<sup>9</sup>

Graphic design has a great deal to offer the educational landscape. We live in a time when many political, social and cultural problems plague students around the world. Designers have the means to create tools, interfaces, and systems that support media and content convergence and, thus, encourage alternative educational strategies. As designers create new media spaces that work within educational institutions, they also inspire and empower students to participate and author new media content.

#### NOTES

1. Jenkins, Henry and Ravi Purushotma, Katherine Clinton, Margaret Weigel, and Alice J. Robinson. “Confronting the Challenges of Participatory Culture: Media Education in the 21st Century;” 2006, The MacArthur Foundation, The New Media Literacies Project, 22 September 2007, <http://www.projectnml.org/files/working/NMLWhitePaper.pdf>, 3.
2. Ibid, 8.
3. McCarthy, Bernice. *The 4Mat System, Teaching to Learning Styles with Right/Left Mode Techniques*. Barrington, IL: Excel, Inc. 1980, 24.
4. Jenkins, Henry and Ravi Purushotma, Katherine Clinton, Margaret Weigel, and Alice J. Robinson. “Confronting the Challenges of Participatory Culture: Media Education in the 21st Century;” 2006, The MacArthur Foundation, The New Media Literacies Project, 22 September 2007, <http://www.projectnml.org/files/working/NMLWhitePaper.pdf>, 57-58.
5. Ibid, 10.
6. Jenkins, Henry and Ravi Purushotma, Katherine Clinton, Margaret Weigel, and Alice J. Robinson. “Confronting the Challenges of Participatory Culture: Media Education in the 21st Century;” 2006, The MacArthur Foundation, The New Media Literacies Project, 22 September 2007, <http://www.projectnml.org/files/working/NMLWhitePaper.pdf>, 5.
7. Davis, Meredith, Peter Hawley, Bernard McMullen and Gertrude Spilka. *Design as a Catalyst for Learning*. Alexandria, VA: Association for Supervision and Curriculum Development, 1997, 33.
8. McLuhan, Marshall. *Understanding Media; Extensions of Man*. Corte Madera, CA: Gingko Press, Inc. 2003, 1964 and 1994, 386.
9. Ibid, 387.

#### OTHER RESOURCES

Jenkins, Henry. *Fans, Bloggers, and Gamers*. New York: New York University Press, 2006.

Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press, 2006.

Kolb, David A. *Experiential Learning, Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall, Inc. 1984.

Olafson, Lori. *It's Just Easier Not To Go To School; Adolescent Girls and Disengagement in Middle School*, New York: Peter Lang, 2006.

Salen, Katie and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*, Cambridge, MA: MIT Press 2004.



Impressions, thoughts... (even gut reactions):

## Culture probes

what 😊

laptop

bracelet

facebook

I customize my pants  
must hem them → I a  
short as short can be

pocket notebooks

Ⓞ desktop icons

my coffee



suggestions.



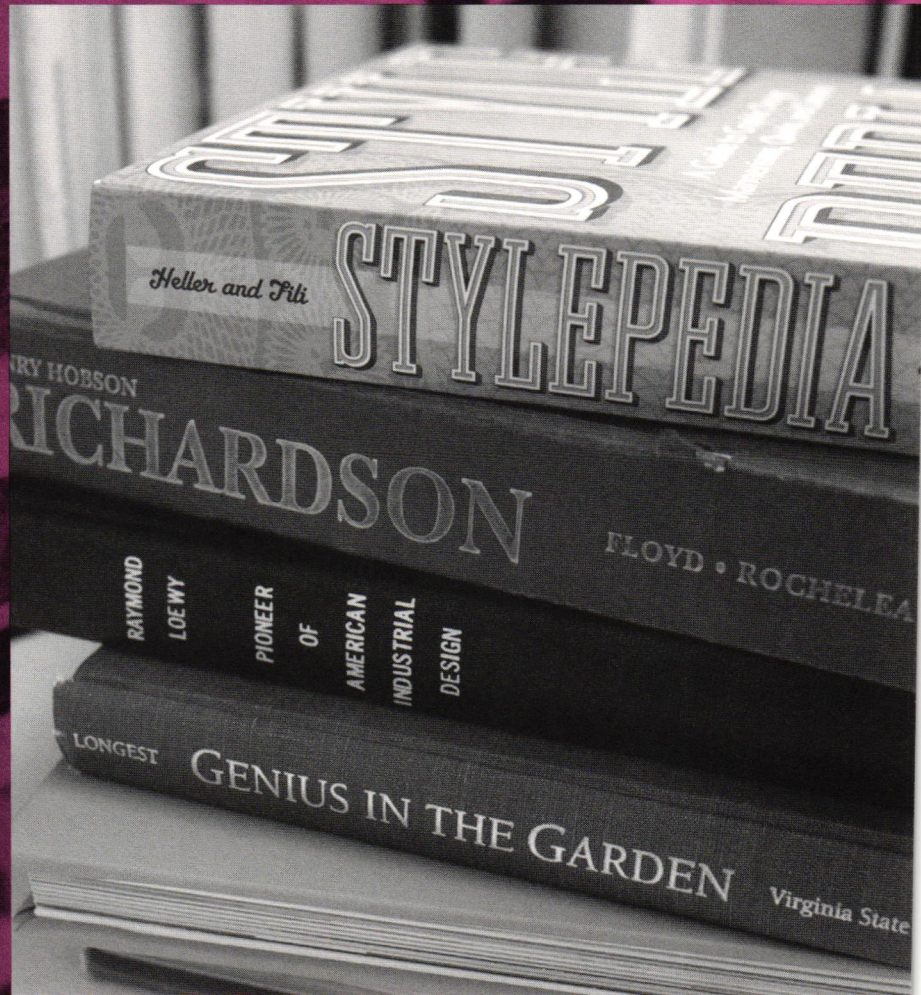


# Debunking the myth

*How Online Technologies Challenge the “Cul*

DEBORAH LITTLEJOHN

Deborah Littlejohn has been a graphic design practitioner for more than 14 years. She taught for several years at Minneapolis College of Art and Design. Deborah received her M.F.A from California Institute of the Arts, and, since 2007, she has been working diligently at NC State toward a Ph.D. in design, focusing on situated learning in media pervasive environments.





## *f the Design Star”*

The history of design—a practice that is inherently a social endeavor—is, ironically, replete with narratives exalting the position of the individual “creative genius.”

Conversely, human history is “a story of the co-evolution of tools and social practices to support ever more complex forms of cooperative society.”<sup>1</sup> Debunking the myth of the creative genius, computer scientist Gerhard Fischer remarks, “There is overwhelming evidence that research on creativity should be grounded in the basic assumption that the power of the unaided individual mind is highly overrated.”<sup>2</sup> Henry Jenkins, comparative media professor on the manner in which creative culture is taught in our schools, denounces, “Our focus on autonomous, creative expression falsifies the actual process by which meaning is generated and new works produced. Most of the classics we teach... are themselves the product of appropriation and transformation....”<sup>3</sup> The myth of the lone artist-genius who has midnight “a-ha!” moments while working in his atelier is as prevalent in the culture-at-large as it is in our schools.

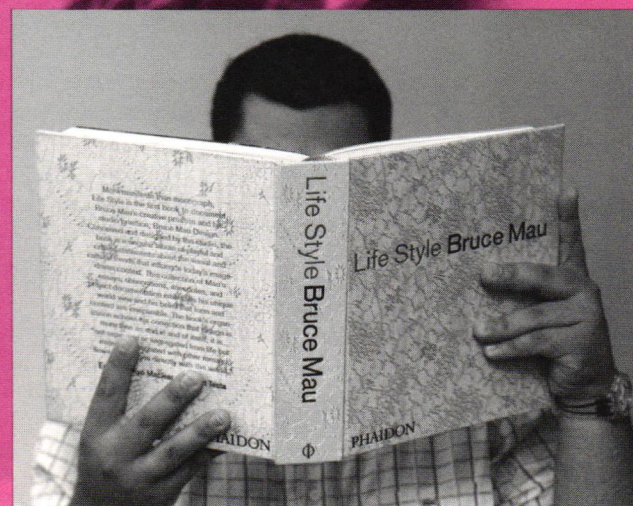
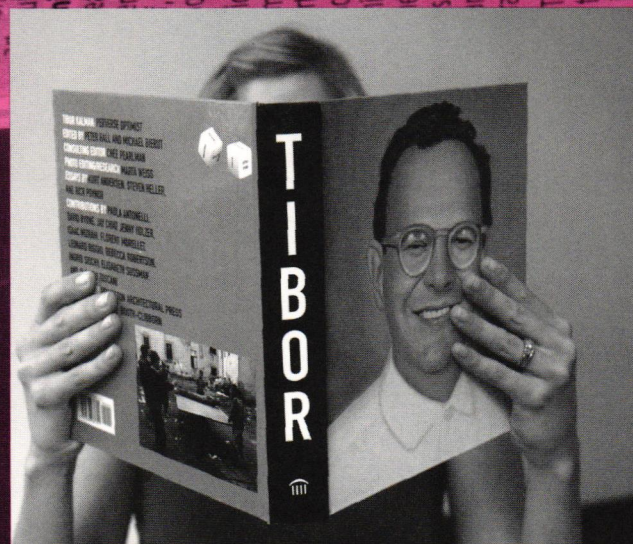
The representation of design in the popular press has also been dominated by the achievements of individuals, perpetuating a similarly egocentric, and romanticized, “Design Star” mythology. Designers understand the history



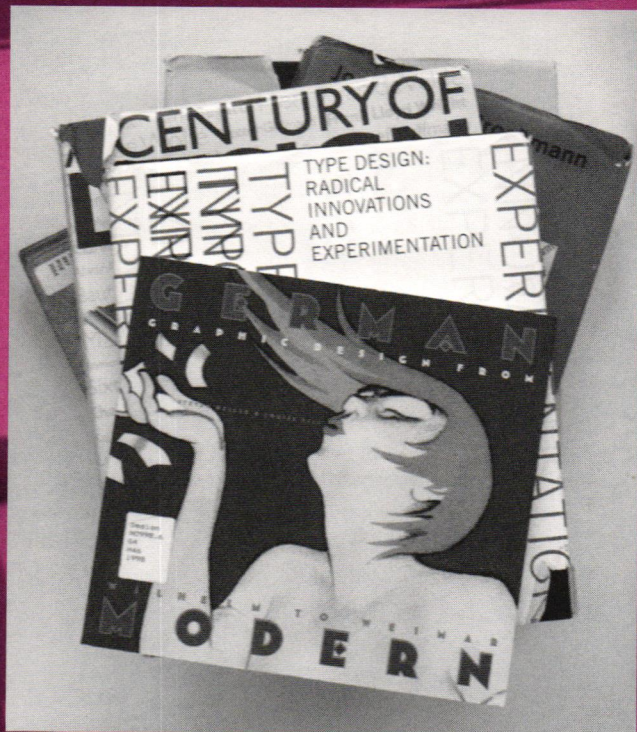
of their profession, for the most part, through images and narratives of iconic “objects and projects” and the “pioneering design heroes” who create them. Equally telling, the focus of teaching design is on the individual student who is praised, critiqued and graded upon the notion of being the sole author/producer of his or her own work. Consequently, students typically work on their projects while isolated in front of a computer.

Such scenarios privilege the artifact—and the techno-formal issues in making it—over the contexts in which design is created, disseminated and interpreted within the culture. These scenarios also ignore the substantial insights gained from more recent theory developed over the past two decades into the ways in which people learn through collaboration, inter/cross-disciplinary teamwork, and authentic problems situated in life-like, holistic settings that employ technology as a means of connecting with others, rather than simply as a production tool.<sup>4</sup> However, it is to our own detriment when design relegates the computer to just another production tool, because doing so ignores most of what is happening between people and these networked technologies.

Along with a “do-it-yourself” zeitgeist, online collaborative tools challenge everything that defines the “Cult of the Design Star” mindset. In particular, the use of participatory technologies—e.g., reputation software, recommender systems, group knowledge repositories, peer-to-peer media sharing, and interactive online games—is changing the approaches people take when working together to problem-solve, create, communicate and learn,<sup>5</sup> fostering new literacies and social behaviors,







*“As a faculty member who is a frequent collaborator, my biggest direct concern is with how to be recognized academically in an institution that values the singular hero/academic model in the tenure process.”*

participant from Option Shift Control symposium culture probes

including in those individuals who each year will enter the higher-education system as potential design majors. In the near future, this will be a generation weaned on multidimensional, interactive and participatory media whose understanding and expectations of the world differ profoundly from that of the generations preceding them. This demographic shift<sup>6</sup> heralds far-reaching, systemic challenges for our educational system. Consider the following statistics from a study by the Pew Internet and American Life Project:<sup>7</sup>

*More than half of all teens (64%) ages 12–17 use online social networking sites.*

*57% of all teens who use the Internet have used it to create content and share it with their friends online; girls dominate most elements of content creation—35% of girls blog, and 20% of boys.*

*Nearly half (47%) of online teens have posted photos open for viewing by others, and 89% of those teens who post photos say that people comment on them at least “some of the time.”*

*There is a subset of teens who are “super communicators”—those who have a host of technology options for dealing with family and friends, including traditional landline phones, cell phones, texting, social networking sites, instant messaging and email. They represent about 28% of the entire teen population.*

*81% of teens who access the Internet play online games.*

The ubiquity of these technologies has empowered anyone with access to participate in creative cultural production, once the exclusive domain of artists, writers, poets, filmmakers, musicians and designers.<sup>8</sup> Their proliferation demands that designers think of their audiences not simply as consumers and users, but as participants and co-designers. The educational equivalent of this notion

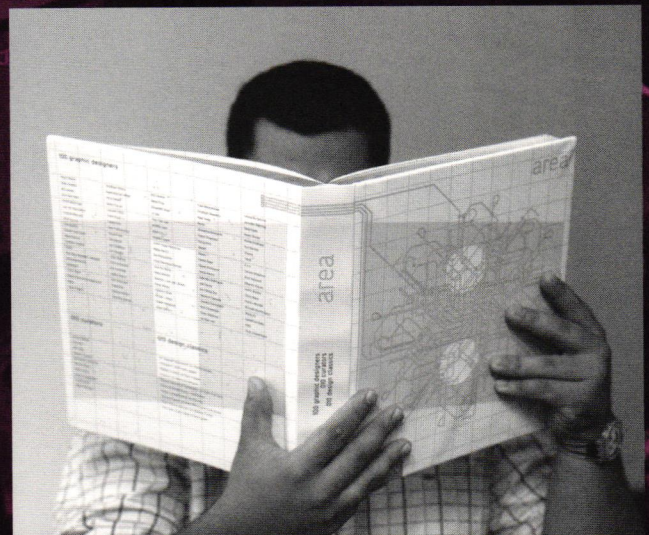
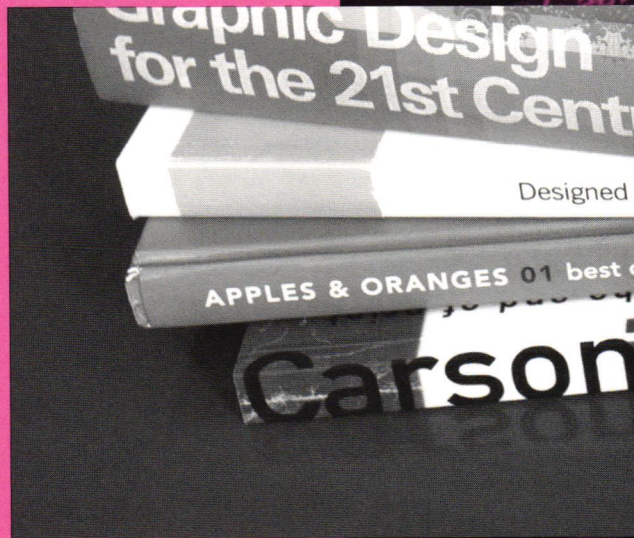


*"Academia will need to embrace collaborative methods (not just design schools) in order to really make those very collaborative methods thrive."*

participant from Option  
Shift Control symposium  
culture probes

also requires educators to think of students differently. Students' means of using digital technologies are fundamentally different from how design educators teach them. Implicated herein is the practice of teaching primarily through one-on-one "desk crits"—what Swann<sup>9</sup> derogatorily refers to as the "Sitting by Nellie" approach, which often results in faculty demonstrating their own expertise to improve some aspect of the students' work. Conversely, by motivating students as active participants in learning, constructing knowledge collaboratively with their peers—rather than relying upon transmissive teacher-to-student approaches that create what Fischer calls "passive, consumer-learners"<sup>10</sup>—cooperative technologies deemphasize a focus on an isolated learner. Collaborative practices are not just about learning how to master the use of participatory technologies; they should also be understood as social skills that enable engagement within a larger group or community, and not simply as individual skills to master for personal expression.

The implications of participatory technologies for the practice of design will be long-term, far-reaching and, at the moment, are only now beginning to be understood—though they are certainly being felt. What these developments mean for design education has barely begun to be addressed. "The informal participatory communities of fans and gamers are where digital natives already congregate when they seek out knowledge—not the traditional





classroom where learning is seen to be static, provisional and bureaucratic," Jenkins declares.<sup>11</sup> Equally valid to design: "Schools are currently still training autonomous problem-solvers, whereas as students enter the workplace, they are increasingly being asked to work in teams, drawing on different sets of expertise, and collaborating to solve problems."<sup>12</sup> Digital technologies now allow anyone with access to not only peer behind the curtain of the mysterious creative process, but to experiment with it, and even appropriate the creations of others, first hand. Pierre Levy's notion of a problem solving, democratic "collective intelligence"<sup>13</sup> is already a reality on the Net where many of tomorrow's designers now engage with creative culture. When this group enters the domain of higher education, they will not leave their online communities and collaborative skills at the door.

There will always be a symbiotic relationship between design and the technologies used to support the creation of artifacts. Nevertheless, when connected digital technologies are introduced in the design studio—as they were in the 90s—a new way of (net)working and engaging with design's communities of practice<sup>14</sup> is possible. Consequently, design education requires a new approach that imparts relevant knowledge and skills in partnership with these technologies—technologies whose strength is in taking advantage of a classroom that exists beyond the academy walls and positions the design student as a part of a broader community of learners. From this perspective, the student is not only an individualized learner and the classroom is not the privileged locus of learning. The classroom-cum-studio is not a self-contained, closed world in which students acquire knowledge within to be applied outside, but a part of a broader learning system. The design classroom and its curriculum of projects, critiques and comps still have a crucial role to play in such a context, but they have to be connected with what students know about in their world.

#### NOTES

This article is based on research from a 2006 KnowledgeWorks Foundation ([kwfdn.org](http://kwfdn.org)).

1. Rheingold, H. (2005), "Technologies of Cooperation," PDF available at [www.iff.org/node/763](http://www.iff.org/node/763)

2. Fischer, G. (2000), "Creativity and Distributed Intelligence," in John-Steiner, V. (ed.), *Creative Collaboration*. Oxford: Oxford University Press.

3. Jenkins, H. (2006), "Confronting the Challenge of Participatory Culture: Media Education for the 21st Century," PDF available from the MacArthur Foundation web site at <http://digitalllearning.macfound.org/site/c.enJLKQNFtG/b.2029199/k.BFC9/Home.htm>

4. E.g., situated learning, cultural-historical activity theory, constructionist/constructivist learning theory, anchored instruction, case-based learning and project/problem-based learning. See also Jonassen, D. & Land, S. eds. (2000), *Theoretical Foundations of Learning Environments*. Lawrence Erlbaum Associates, Publishers: London.

5. For example, Wikipedia.com, the online encyclopedia written collaboratively by volunteers; Amazon.com's Mechanical Turk that allows people to create Human Intelligence Tasks (HITS) and then catalyze people to accomplish it; individuals all over the world searching the Nevada desert for the 2007 crash site of explorer Steve Fossett; open innovation marketplaces like InnoCentive.com and Ninesigma.com that match problem solvers with solution seekers; and design collectives like ThinkCycle.com that match the needs of NGOs with design schools around the world.

6. [www.kwfdn.org/map](http://www.kwfdn.org/map)

7. [www.pewinternet.org/reports.asp](http://www.pewinternet.org/reports.asp)

8. O'Conner, W. (1997). "Create or Be Created: How the Internet Cultural Renaissance is Turning Members into Artists," in *FirstMonday*, Vol. 2, No. 10, non-paginated.

9. Swann, C. (2002). "Nellie is Dead," *Art, Design & Communication in Higher Education*, Vol. 1, pp. 50-53.

10. Fischer, G. (2002), "Beyond 'Couch Potatoes': From Consumers to Designers and Active Contributors" in *FirstMonday*, Vol. 7, No. 12, non-paginated.

11. Jenkins, H. (2006).

12. Ibid.

13. Levy, P. (1997), *Collective Intelligence*. Cambridge, MA: Perseus Books.

14. Wenger, E. (1999), *Communities of Practice*. Cambridge, England: Cambridge University Press.



Impressions, thoughts...(even gut reactions):

## Culture probes

FREE EVERYTHING!

Must collaborators each d



judgments.



Can collaboration inspire a new pedagogy?



# participation

How can interdisciplinary teams affect a community?

**05: Choreographing Urban Sustainability  
with Communities**, Emily McCoy

What are some current examples of collaboration  
in design education?

**15: 2008 Design Camp, *Exploring Design  
Through Collaboration***, 2008 Design Camp faculty

Do you feel as if you have a role in your community?

**21: *Is Green the New Black?***, Kofi Boone

How will co-creation with non-designers  
affect the outcome?

**27: *Design Anthropology***, Elizabeth Tunstall



*Impressions, thoughts... (even gut reactions):*

## Culture probes

collaboration for some  
~~Crossing disciplines?~~ Is collab  
the equivalent to gumbo (in  
pieces in a pot) or con  
(where the meat has be  
filtered, and reduced  
clear, unimpfied but non  
broth → recipe for m  
value does



# thoughts.

a  
atening)  
nty?  
oration  
to me



# Choreographing Urban Sustainability *with Communities*

EMILY MCCOY

Residents and employees of the NC State University cooperative extension program work together to construct stormwater BMP's to slow down, transpire and filter stormwater before it travels to our waterbodies.

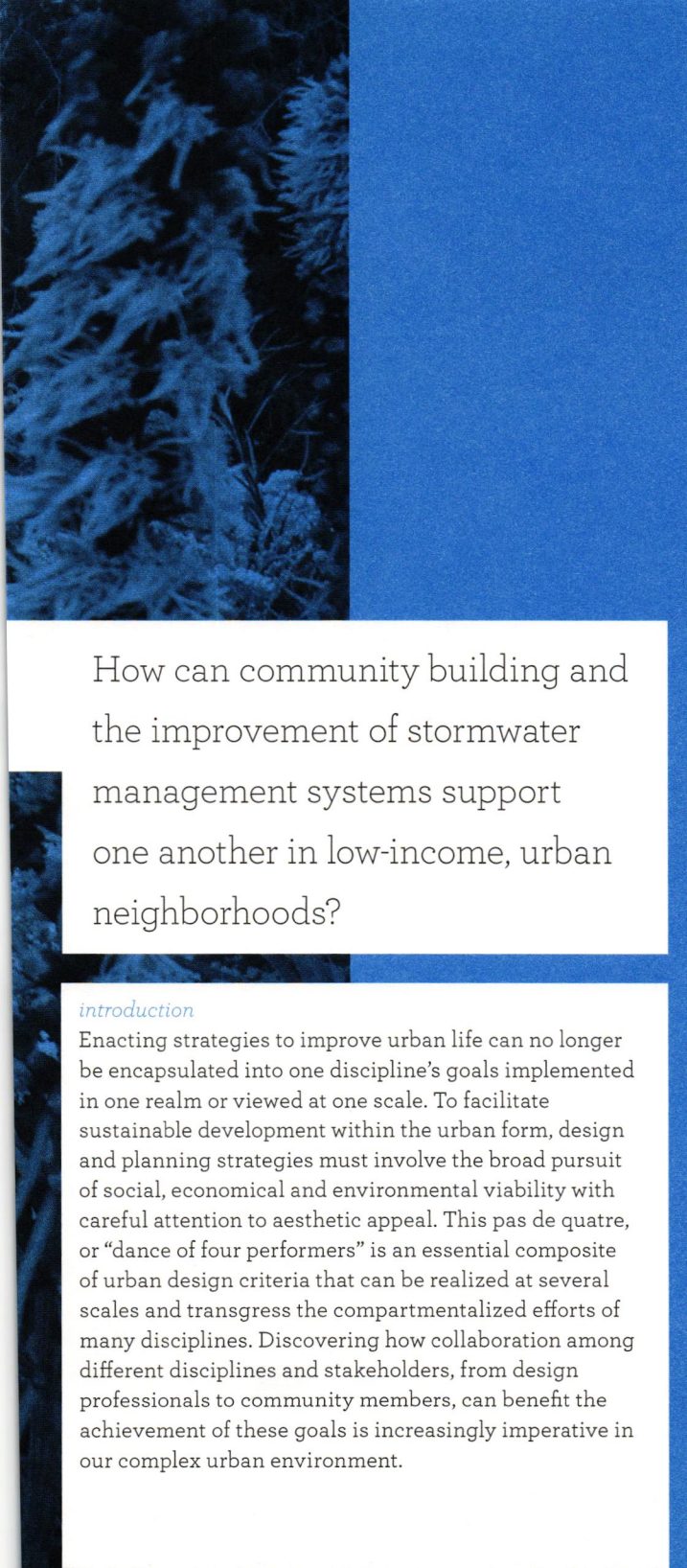
IMAGE BY NCSU WECO

ALL OTHER IMAGES AND ILLUSTRATIONS IN THE ARTICLE WERE CREATED BY EMILY MCCOY FOR HER FINAL GRADUATE PROJECT, UNLESS OTHERWISE NOTED.



*Emily Ryan McCoy, associate ASLA, is a recent graduate of the NC State College of Design Master of Landscape Architecture Program and received her B.S. in Ecology and Environmental Biology from Appalachian State University in 2002. Emily has recently accepted the position of landscape designer with the landscape architecture firm Andropogon Associates in Philadelphia, PA.*





## How can community building and the improvement of stormwater management systems support one another in low-income, urban neighborhoods?

### *introduction*

Enacting strategies to improve urban life can no longer be encapsulated into one discipline's goals implemented in one realm or viewed at one scale. To facilitate sustainable development within the urban form, design and planning strategies must involve the broad pursuit of social, economical and environmental viability with careful attention to aesthetic appeal. This *pas de quatre*, or "dance of four performers" is an essential composite of urban design criteria that can be realized at several scales and transgress the compartmentalized efforts of many disciplines. Discovering how collaboration among different disciplines and stakeholders, from design professionals to community members, can benefit the achievement of these goals is increasingly imperative in our complex urban environment.

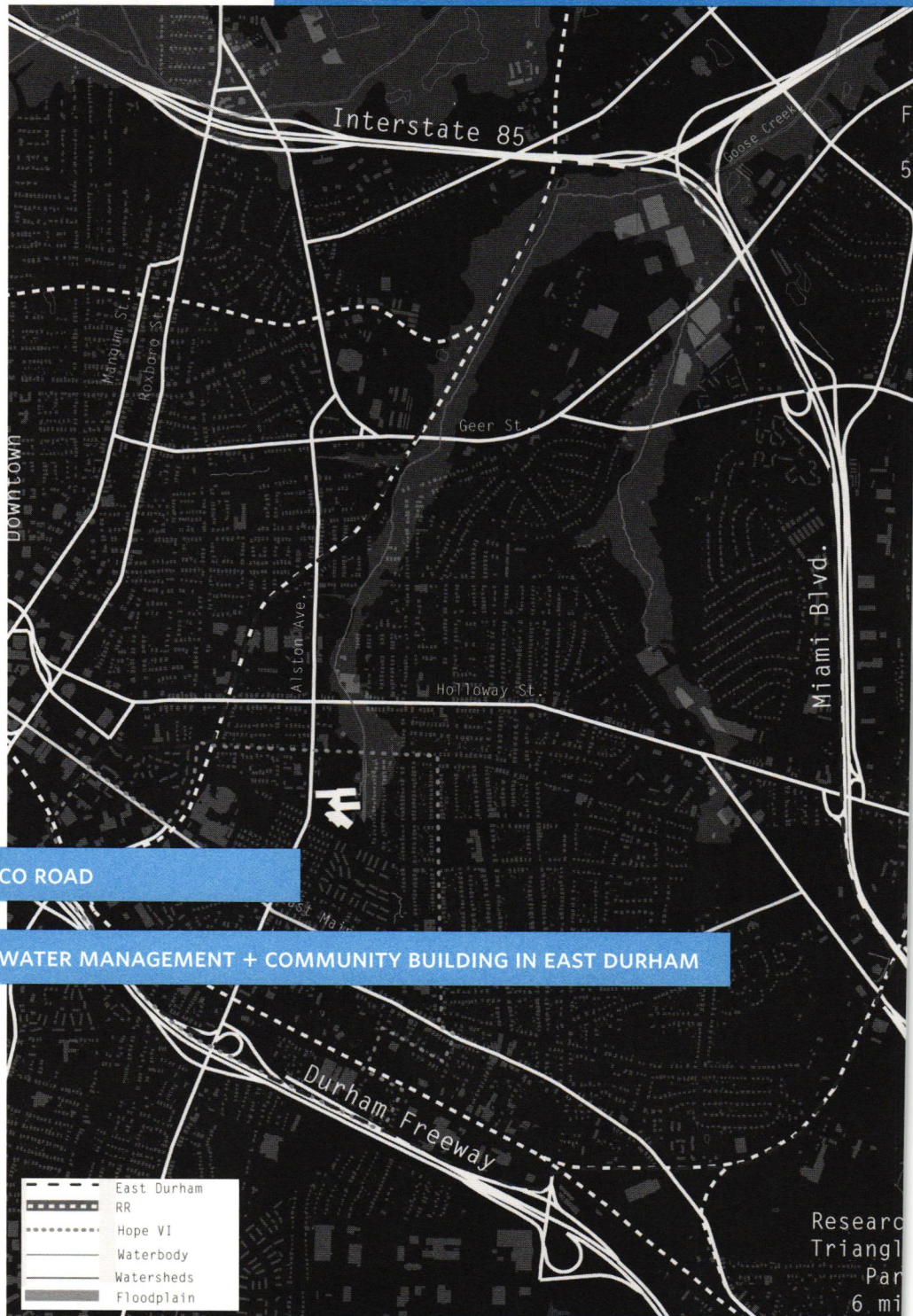
One such collaboration is between groups involved in improving hydrological resources by integrating stormwater management with natural hydrological form and function (typically civil engineers, landscape architects, architects and scientists), and those involved with restoring communities through community building—typically community members, social workers, neighborhood groups, political activists, municipal governments and non-profit organizations. Lack of social and economic resources and water quality and quantity concerns are significant problems in the urban environment,<sup>1</sup> especially in low-income neighborhoods.<sup>2</sup> Typically, organizations that strive to improve these resources work independently. However, by marrying community building and innovative stormwater management strategies, communities and professionals can work together to improve the quality of urban life by choreographing a balanced "dance of the four performers."

Several partnerships between the public and private sectors have been developed to address urban stormwater management and community revitalization.<sup>3</sup> In recent years, these partnerships have found success by integrating their watershed improvement efforts with ongoing community building strategies in urban neighborhoods. Alone, many community building efforts since the 1970's have been exemplary in helping communities in need become aware of and develop their assets and capacities. These efforts have resulted in stronger neighborhoods, socially and economically.<sup>4</sup> By marrying community building and natural resource improvement efforts, like stormwater management, communities and professionals can work together also to improve environmental health.

### *methods*

The methods utilized in this investigation were to critically review the literature, conduct four case studies,<sup>5</sup> and one post-occupancy evaluation, involving a community survey, (The Bottom Neighborhood Project) to discover how such partnerships can be executed successfully. These findings were compiled in a research paper titled, "How can community building and improved stormwater management systems support one another in low-income, urban communities?"<sup>6</sup> Furthermore, the conclusions extracted from the research paper were then applied to a





REINTERPRETING TOBACCO ROAD

STRATEGIES FOR STORMWATER MANAGEMENT + COMMUNITY BUILDING IN EAST DURHAM

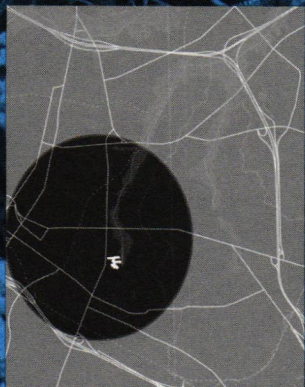
Research findings applied to a design project in East Durham, N.C.



## SITE CONTEXT



Goose Creek Watershed [macro].



Living + Learning Neighborhood [meso].



Eastway Elementary Incubator [micro].

landscape design project in East Durham, North Carolina titled, “Reinterpreting Tobacco Road: Strategies for capturing and releasing a community’s assets through community building and improved stormwater management in East Durham, North Carolina.””

### results

Innovative stormwater management and community building can benefit everyone in meanings that would not exist if the interaction was never initiated. From the literature review, case studies and post-occupancy evaluation, several lessons can be learned. This inquiry has revealed that successful partnerships require that communities be involved in the decision-making process and that stormwater management strategies be tailored to unique community values and therefore contribute to social and economic health, as well as aesthetic appeal and desirability. It has also been found that success for these projects depends on whether plans address several scales, occur within both public and private frameworks, have long-term sources for financial support and involve community members at all stages of the process. One key component to establishing a relationship between watershed improvement and community building efforts is community communication about the potential mutual benefits of such a collaboration, as outlined in the following sections.

### *how can the improvement of stormwater management systems potentially benefit community building efforts?*

There are several approaches to stormwater management aside from conventional pipe, end-of-pipe-pond treatment and curb-and-gutter systems within an urban community that can ultimately benefit a community socially and economically, as well as environmentally. These innovative systems utilize plant material and soil to filter, infiltrate, slow down, cool-off and transpire stormwater as opposed to displacing polluted stormwater into our waterbodies. Although this re-introduction of hydrological processes to the urban environment can potentially have several benefits for a community, relaying these benefits and educating communities about hydrological issues is one of the most difficult aspects of this process.

Many people in low-income communities do not believe stormwater issues are the most important issues in their communities<sup>8</sup> and no one should have the illusion that

## NOTES

1. Fraser, J. and Kick, E. (2005). Understanding community building in urban America. *Journal of Poverty*, 9(1), 23-43; Kretzman, J.P. and McKnight, J.L. (1993). Building communities from the inside out: a path toward finding and mobilizing a community’s assets. Chicago, IL: ACTA Publications; Lyon, L. (1987). The community in urban society. Chicago, Ill.: Dorsey Press, pp. 12-15, 95-105; Putnam, R.D. (1995). Bowling alone: America’s declining social capital. *Journal of Democracy*, 6(1): 65-78; Roe, M.H. (2000). The social dimensions of landscape sustainability. In Benson, J.F. and Roe, M.H. (Eds), *Landscape and sustainability* (pp. 52-77). New York: Spon press.; U.S. Environmental Protection Agency. (1998). National Water Quality Inventory: 1996 Report to Congress (EPA841-R-97-008), pp. ES-13, 147. Washington, D.C.:U.S. Government Printing Office.

2. Fothergill, A. and Peek, L.A. (2004). Poverty and disasters in the United States: a review of recent sociological findings. *Natural Hazards*, 32: 89-110; Morrow, B.H. (1999). Identifying and mapping community vulnerability. *Disasters*, 23(1):1-18; Torras, M. and Boyce, J.K. (1998). Income, inequality and pollution: a reassessment of the environmental Kuznets Curve. *Ecological Economics*, 25(2), 147-160.

3. AWI (2008). Web site <http://dcbiz.dc.gov/dmped/cwp/view%2Ca%2C1365%2Cq%2C605699.asp>; AWI, District of Columbia, Office of Planning (2003). *The Anacostia Waterfront: imagine, act, transform*. Washington, D.C.: WPLP (2007). Web site <http://web.mit.edu/4.243/www/wplp/about.html>; WECO (2008). <http://www.ces.ncsu.edu/depts/agecon/WECO/>; Perrin, C., Beggs, P., Butler, J. and Wright, J. (2006). Engaging Wilmington residents in stormwater management. Presentation to Southeastern watershed roundtable, Asheville, NC, August 2-4, 2006; National Center for Environmental Research. USEPA (2008). Web sites <http://cfpub.epa.gov/ncer/abstracts/index.cfm/fuseaction/display.abstractDetail/abstract/7359/report/F> and [http://www.water.rutgers.edu/Senior\\_Design/P3\\_finalreport\\_reduced.pdf](http://www.water.rutgers.edu/Senior_Design/P3_finalreport_reduced.pdf); Ferguson, B., Pinkham, R. and Collins, T. (2001). Restorative redevelopment: the nine mile run model. *Stormwater* 2(5). Retrieved from <http://www.forester.net/sw0107restorative.html> on September 13, 2007.

4. Kretzman, J.P. and McKnight, J.L. (1993). *Building communities from the inside out: a path toward finding and mobilizing a community’s assets*. Chicago, IL: ACTA Publications.





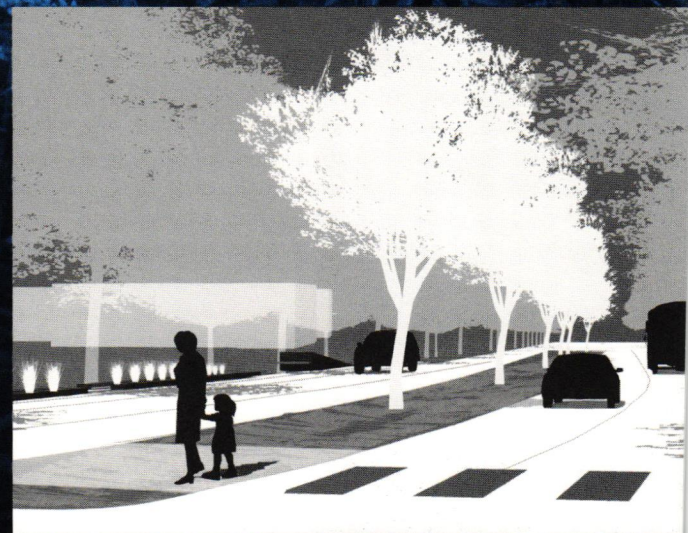
they are. This is especially true in areas where crime and unemployment are major concerns. Nevertheless, many benefits of innovative hydrological systems have secondary returns that can contribute to the amelioration of a community in ways that relate to residents' major concerns and parallel goals of community building organizations.

*among some secondary benefits are:*

The addition of "greener" landscapes and open space amenities can improve human physical and mental health and promote a higher quality of life (crime reduction, less environmental pollutants, aesthetic enhancement, less prevalence of vacant or neglected land, etc.).<sup>9</sup>

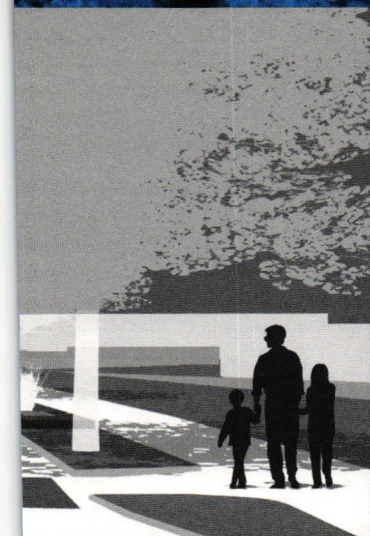
The transformation of hydrological liabilities into assets/ amenities (stream corridors, floodplains, vacant land, etc.).<sup>10</sup>

The promotion of a sense of place, pride in one's community and identity.<sup>11</sup>





used for improved dialogue  
between citizens and NCDOT to discuss  
potential road widening scenarios and their  
impact on pedestrians and hydrology.



The enhancement of social and human capital (jobs, education, networking) by using the rehabilitation, construction and maintenance of urban hydrological systems as a catalyst.<sup>12</sup>

Programs that offer exciting and “hands-on” activities for their members to become actively engaged and involved in the decision-making process.<sup>13</sup>

Economic benefits such as green collar job development<sup>14</sup>, inexpensive alternatives to traditional stormwater management<sup>15</sup> and increases in property values.<sup>16</sup>

*How can community building efforts potentially benefit the improvement of stormwater management systems?*

Public outreach and education are critical elements and equally important as structural controls for improving water quality in our communities.<sup>17</sup> Existing community building programs can initiate and supplement many of the components needed for successful educational and outreach programs. Among the potential benefits that community building organizations can provide for watershed improvement efforts are (as observed from case studies and the literature):

Clear insight into the community's unique values and concerns;

Organizational structure, participants/volunteers, trust and leadership for planning, implementation, self-evaluation and long-term viability;

Relationships with other groups within the community (government, non-profit, religious, etc);

5. AWI (2008). Web site <http://dcbiz.dc.gov/dmped/cwp/view%2Ca%2C1365%2Cq%2C605699.asp>; AWI, District of Columbia, Office of Planning (2003). The Anacostia Waterfront: imagine, act, transform. Washington, D.C.; WPLP (2007). Web site <http://web.mit.edu/4.243j/www/wplp/about.html>; WECO (2008). <http://www.ces.ncsu.edu/depts/agecon/WECO/>; Perrin, C., Beggs, P., Butler, J. and Wright, J. (2006). Engaging Wilmington residents in stormwater management. Presentation to Southeastern watershed roundtable, Asheville, N.C., August 2-4, 2006.

6. McCoy, E.R. (2008). How can community building and improved stormwater management systems support one another in low-income, urban communities? (Final Project, Master of Landscape Architecture North Carolina State University). Final project research paper submitted in partial fulfillment of the degree Master's of Landscape Architecture. North Carolina State University. College of Design.

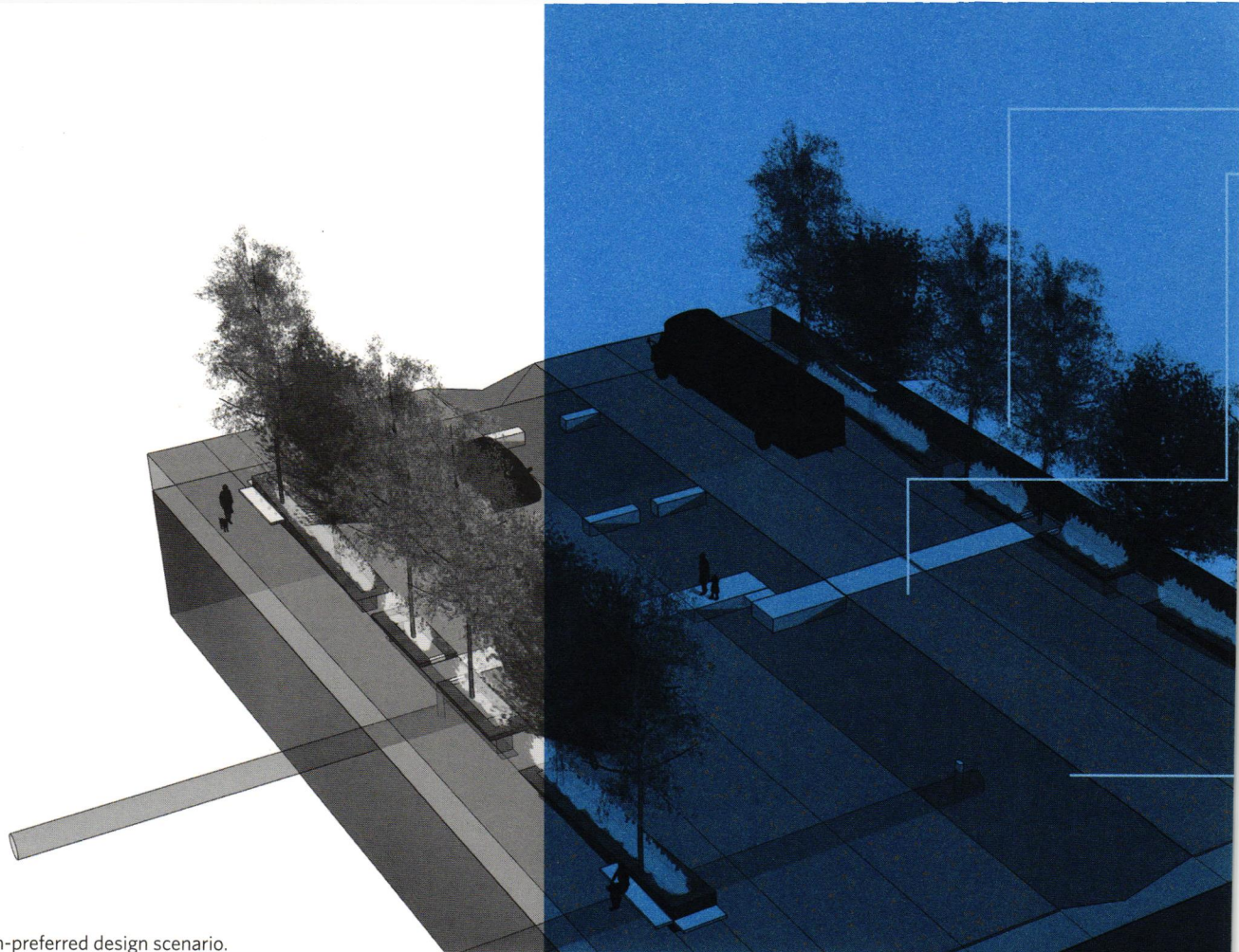
7. Ibid.

8. Ibid.; Ryan, R.L. and Grese, R.E. (2005). Urban volunteers and the environment: forest and prairie restoration. In Peggy F. Bartlett (Ed.), Urban place: reconnecting with the natural world (pp. 173-188). Cambridge, MA: MIT Press.

9. Austin, M.E. and Kaplan, R. (2003). Identity, involvement and expertise in the inner city: some benefits of tree planting projects. In Identity and the Natural Environment: The psychological significance of nature. Susan Clayton and Susan Opatow, eds. Pp. 205-225. Cambridge, MA: MIT Press.; Hartig, T., Mang, M. & Evans, G. W. (1991). The restorative effects of natural environment experience. *Environment and Behavior*, 23(1), 3-26; Kaplan, S. and Kaplan, R. (2003). Health, supportive environments, and the reasonable person model. *American Journal of Public Health* 93(9):1484-1489; Kuo, F.E. and Sullivan, W.C. (2001). Environment and crime in the inner city: does vegetation reduce crime? *Environment and Behavior*, 33(3), 343-367; Kuo, F.E., Sullivan, W.C., Coley, R.L. and Brunson, L. (1998). Fertile ground for community: inner city neighborhood common spaces. *American Journal of Community Psychology* 26(1):823-851.

10. Braden, J.B. and Johnston, D.M. (2004). Downstream economic benefits from stormwater management. *Journal of water resources planning and management* 130(6), 498-505; Center for Watershed Protection staff (Deb Caraco, Rich Claytor, Jennifer Zielinski). (1998). Nutrient Loading from conventional and innovative site development. Center for Watershed Protection; Ellicott City, MD.





Citizen-preferred design scenario.





STORMWATER STREET SWALES

CHECK DAM BRIDGES

OVERFLOW TO PROPOSED  
SCHOOL'S RAIN GARDEN

Broader links to funding sources;<sup>18</sup>

Physical resources, such as meeting  
venues, and local knowledge.

Verbal networks among volunteers and  
friends of shared knowledge and action.<sup>19</sup>

#### conclusion

It is possible that the implementation and maintenance of innovative stormwater management systems can help alleviate problems that urban communities face if set within a successful, multidisciplinary framework of community revitalization, such as community building. Improved stormwater management systems can also benefit community building efforts by providing venues and activities that engage residents actively in unique and creative ways. The keys to success for this collaboration require **citizen input** at all stages of planning and design and also provides inspiration for community members to take pride in their community. If community building is a social development practice that seeks social enhancement in concert with economic development, then sustainable social development should ensure that environmental resources are not degraded as well. The combination of urban stormwater management and community building represents an emerging trend in addressing the challenges facing communities in a comprehensive way.

*"Participation is existence.  
I fear not existing. My  
physical body dies and I  
become non-existent. But if  
I participate, if I create, if I  
recapture beauty, I become  
a memory worth remembering.  
Man-Beast Philosophy"*

participant from Option  
Shift Control symposium  
culture probes

11. Austin, M.E. and Kaplan, R. (2003). Identity, involvement and expertise in the inner city: some benefits of tree planting projects. In *Identity and the Natural Environment: The psychological significance of nature*. Susan Clayton and Susan Opatow, eds. Pp. 205-225. Cambridge, MA: MIT Press; von Hassell, M.E. (2005). Community gardens in New York City: place, community, and individuality. In Peggy F. Bartlett (Ed.), *Urban place: reconnecting with the natural world* (pp. 91-116). Cambridge, MA: MIT Press; Lynch, B.D. and Brusi, R. (2005). Nature, memory, and nation: New York's Latino gardens and casitas. In *Urban place*.

12. AWI (2008). *Web-address on note #3*; AWI, District of Columbia, Office of Planning (2003). *The Anacostia Waterfront: imagine, act, transform*. Washington, D.C.; WPLP (2007). *Web-address on note #3*; WECCO (2008). *Web-address on note #3*; Perrin, C., Beggs, P., Butler, J. and Wright, J. (2006). *Engaging Wilmington residents in stormwater management*. Presentation to Southeastern watershed roundtable, Asheville, N.C., August 2-4, 2006; National Center for Environmental Research, USEPA (2008). *Web-addresses on note #3*; Ferguson, B., Pinkham, R. and Collins, T. (2001). *Restorative redevelopment: the nine mile run model*. *Stormwater 2*(5). *Web-address on note #3*

13. Ryan and Greesse, 2005; Rafter, D. (2007a). *The importance of volunteers*. *Stormwater 8*(3): 84-88.

14. Rafter, D. (2007b). *The messy business of maintaining BMP's*. *Stormwater 8*(6): 84-88.

15. Center for Watershed Protection staff (Deb Caraco, Rich Claytor, Jennifer Zielinski). (1998). *Nutrient Loading from conventional and innovative site development*. Center for Watershed Protection; Ellicott City, MD; Kirby, K. 1993. *Wetlands not wastelands*. *Scenic America technical information series*, 1(5), 1-8.

16. Braden, J.B. and Johnston, D.M. (2004). *Downstream economic benefits from stormwater management*. *Journal of water resources planning and management 130*(6), 498-505.

17. Lehner, P., Clark, G.P.A., Cameron, D.M., and Frank, A.G. (1999). *Stormwater strategies: community responses to runoff pollution*. Natural Resources Defense Council. Obtained from <http://www.nrdc.org/water/pollution/storm/stoinx.asp>

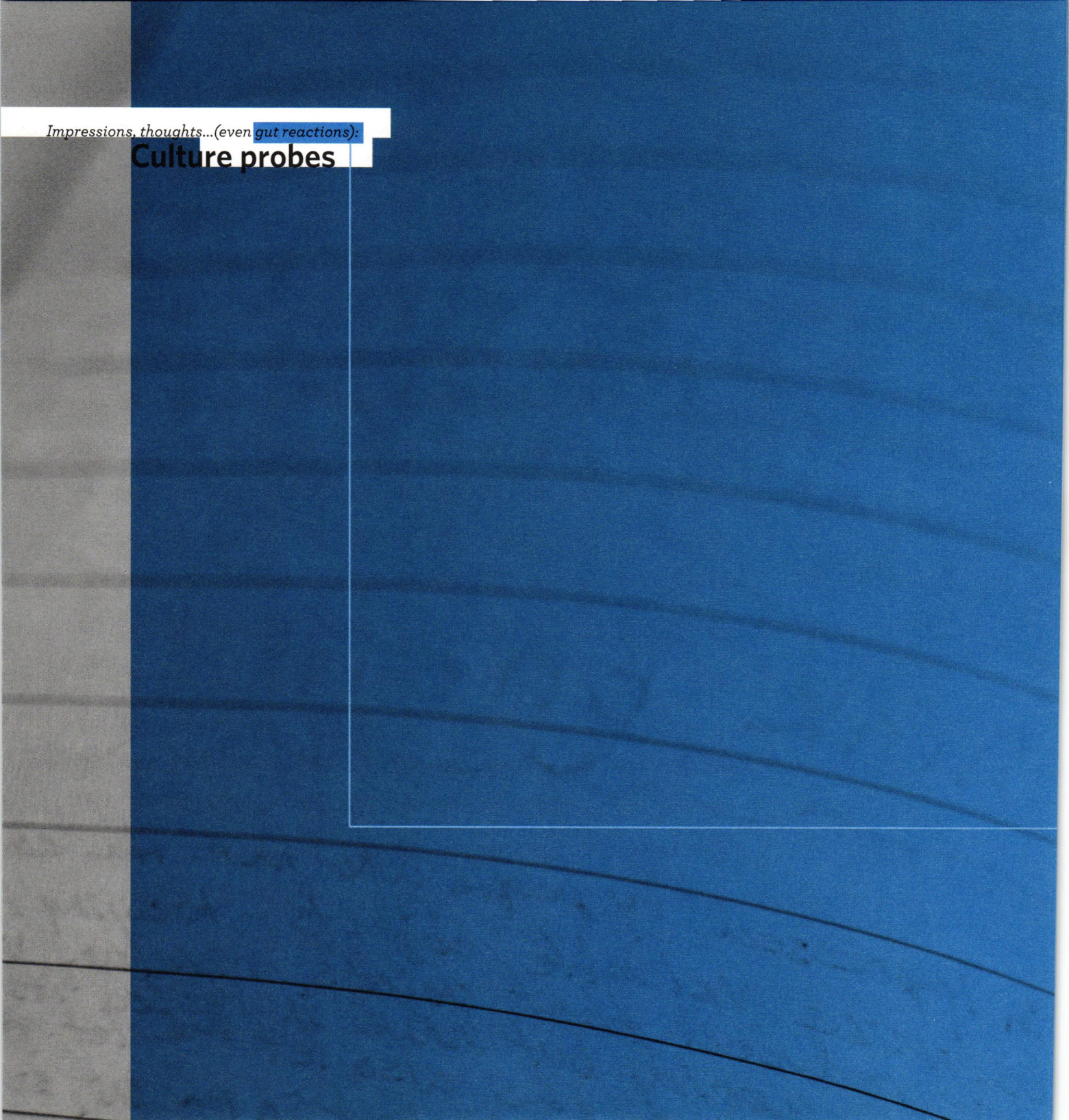
18. Kretzmann, J.P. and McKnight, J.L. (1993). *Building communities from the inside out: a path toward finding and mobilizing a community's assets*. Chicago, IL: ACTA Publications.

19. Rafter, D. (2007a). *The importance of volunteers*. *Stormwater 8*(3): 84-88.



*Impressions, thoughts... (even gut reactions):*

## **Culture probes**





impressions.



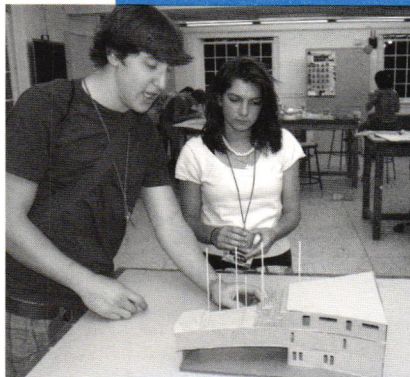
Contemporary Art Museum [CAM] + College of Design

# Design Camp

*Exploring Design through Collaborative*

RYAN DEWITT, JESSICA JOHNSON MOORE, MARTY MAXWELL LANE, ALBERTO RIGAU, ROBERT RUFHLMAN, REBECCA TEGTMEYER, ELIZABETH WAKE

Every summer hundreds of high school students gather at NC State's College of Design to attend Design Camp. Three intensive one-week sessions for those interested in design are modeled by a collaborative effort with Contemporary Art Museum of Raleigh (CAM).



Students collaborate on an Architecture model.

PHOTO BY DESIGN CAMP STAFF

During the week, students are exposed and given the opportunity to explore each of the design disciplines taught at the college: Architecture, Art + Design, Graphic Design, Industrial Design and Landscape Architecture.

This summer, Nicole Welch, curator of education for CAM and director of Design Camp, encouraged an extra twist to the Design Camp experience by motivating instructors to create project assignments which would relate, in some way or another, to the issues of CAM. It is no surprise that many of the projects responded to such a challenge by creating processes that relied on collaborative techniques and work.



### *students collaborate*

The Graphic Design and Art+Design experiences modeled different collaborative conditions for student exposure to varied ways of working and for highlighting the positive results of working with others.

During the first and third week of Design Camp, the Graphic Design project began with each student randomly choosing a phrase taken from the CAM mission statement. As a group, the students brainstormed what ideas the phrases sparked visually. Throughout most of the morning, the students worked individually on analog graphic compositions, analog typographic compositions, and digital type compositions. In the afternoon, students were exposed to a new way of collaborating. Taking their previously created work (that was now scanned into the computers), the students projected their individual work “on top” of a peer’s work. This allowed the students to create, collaboratively layered compositions without the fear and stress of using new software. Once a collective agreement was made, the collaborative composition was photographed.

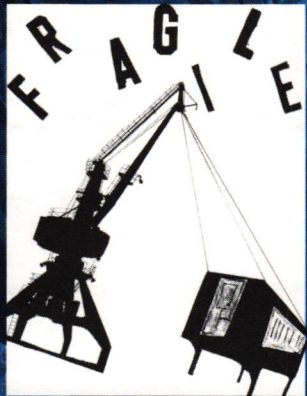
During the second week of Design Camp, students were divided in groups. Working as a design firm for the day they participated in a group post-it ideation session to generate ideas about how they would make the museum experience richer. Once a series of ideas had been generated, students

were told that during that afternoon they were to design a poster 3.5' x 4.5' tall to advertise one of the ideas they had come up with. There were only two requirements: to design one poster per group and that each of the members of the group had to be traced into the poster itself. The project modeled, in a compressed period of time, experiences typical of any group dynamic; negotiations during the creative development; division of labor during the implementation phase; and articulation in the final idea presentation.

Art + Design asked campers to collaborate in animating a digital media piece for CAM. The piece combined a series of video portraits of the campers that were layered and combined into a 3x3 grid, similar to the famous *Brady Bunch* introduction titles. Animations were shown and played together, to create a larger holistic animation. Each group of 16 campers directed their own video.

Students collaborate on Graphic Design project. PHOTO BY ALBERTO RIGAU





Individual Graphic Design analog work is shown at left. Students then used digital projectors to project the work and create the collaborative compositions. The result is shown above.

IMAGE COMPOSITION (LEFT-TOP): ELIZABETH GRAY / TYPOGRAPHIC COMPOSITION (LEFT-BOTTOM): MARIA LUCAS



Art + Design final collaborative compositions done by the student groups.



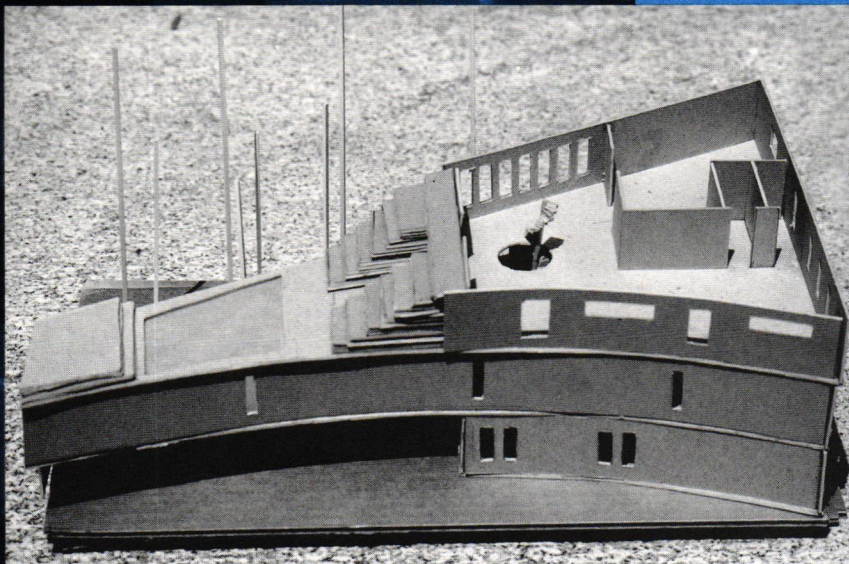
*two disciplines collaborate*

During the first and third weeks of Design Camp, the Architecture and Landscape Architecture experiences were modeled to work with one another in order to expose students to the ways in which designers of different disciplines work together.

Students began the framework in Architecture, where they had to work with four peers as an Architecture firm for the day. Their assignment was to build a chipboard model of a possible building structure for CAM. The real CAM has no building at this point, so the project allowed for unlimited creativity building on a blank canvas.

Students then moved to Landscape Architecture, where the project was based on their building design. They now had to design outdoor gardens, galleries and public spaces that would complement and work with their own model they had built in Architecture.

17



Collaborative Architecture model and corresponding individual Landscape Architecture plan.

PROJECTS BY SAMANTHA BARTELDT, MARIO GAZZOLA AND NICHOLAS SAILER



Impressions, thoughts...(even gut reactions):

## Culture probes

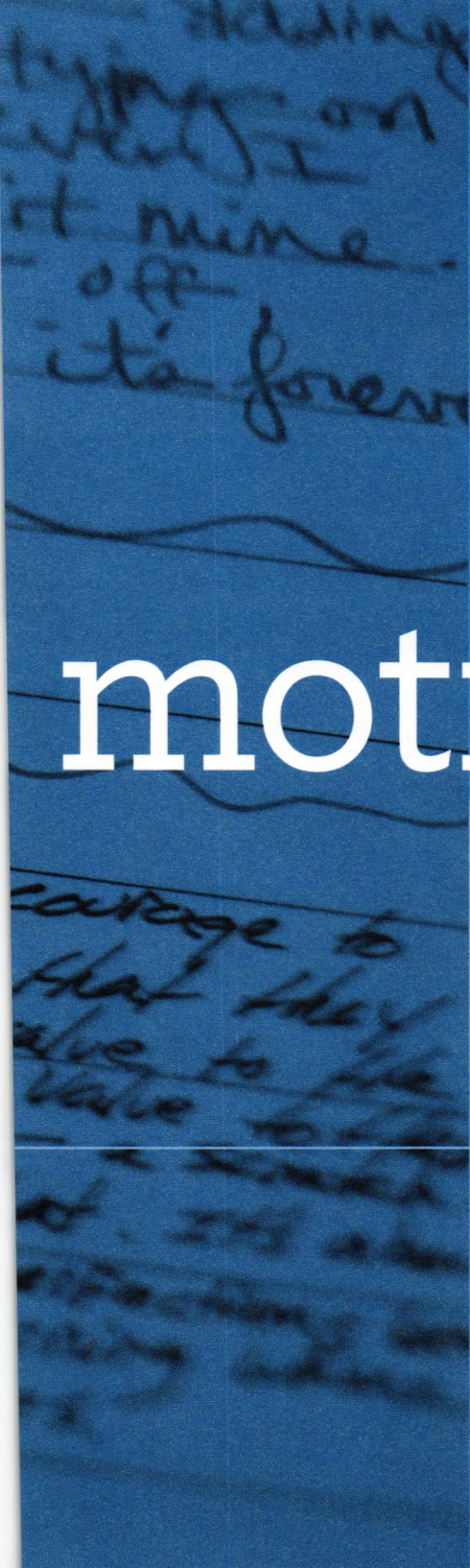
Think

επρωτW

I'm impressed by people who have to  
customize valuable objects - know  
have reduced that object's market  
outside world, but have increased  
But this idea has also let me let  
my computer, so what. A dent in my car, s  
having, less and "owning" more, making the  
buying, appreciating,  
acquiring, loving  
and  
value



# motives.







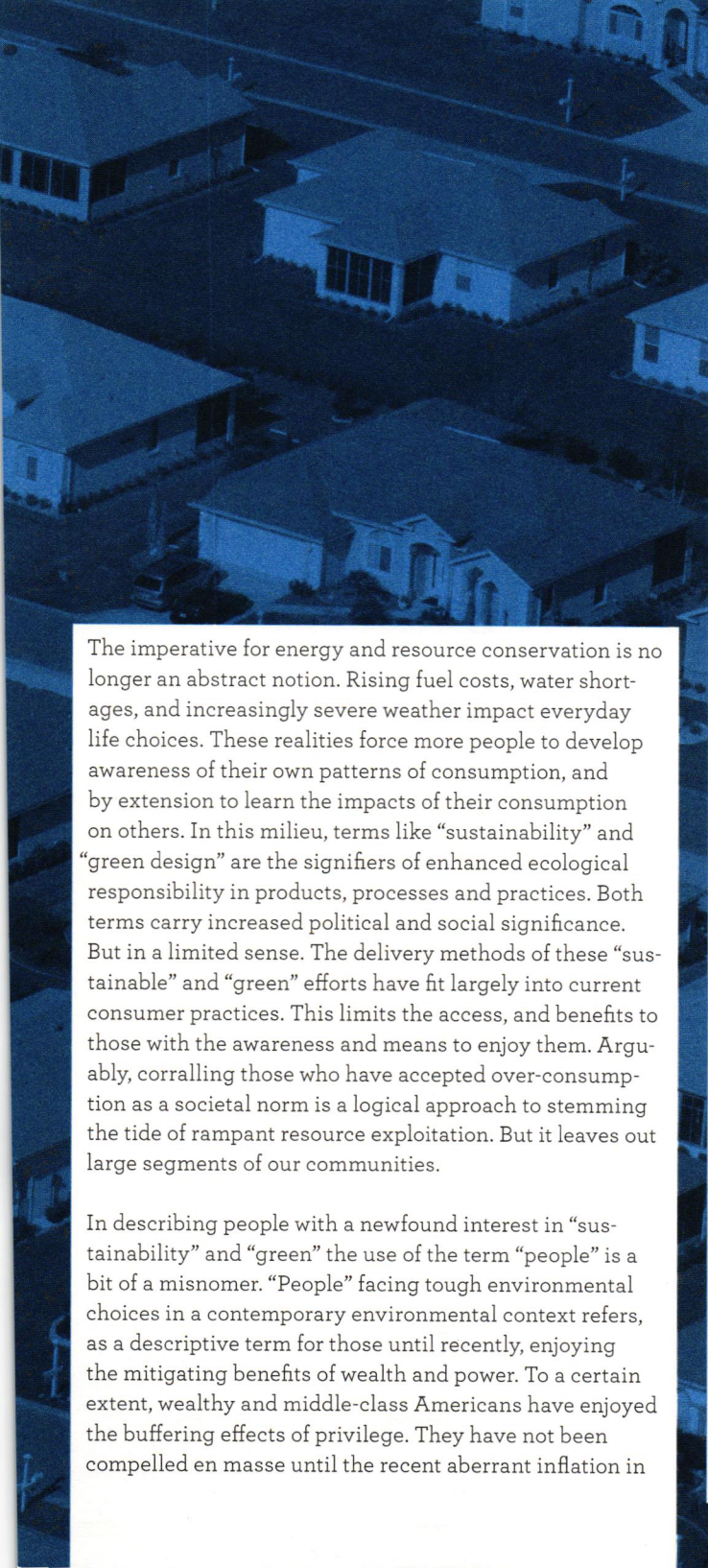
# Is green the new black?

Exploring the disconnect between communities of color and green design influence.

KOFI BOONE

*Kofi Boone is an Assistant Professor in the Department of Landscape Architecture at the NC State College of Design. His research focuses on the overlap between landscape architecture and the environmental justice movement. He received his Master of Landscape Architecture and Bachelor of Science in Natural Resources from the University of Michigan.*





The imperative for energy and resource conservation is no longer an abstract notion. Rising fuel costs, water shortages, and increasingly severe weather impact everyday life choices. These realities force more people to develop awareness of their own patterns of consumption, and by extension to learn the impacts of their consumption on others. In this milieu, terms like “sustainability” and “green design” are the signifiers of enhanced ecological responsibility in products, processes and practices. Both terms carry increased political and social significance. But in a limited sense. The delivery methods of these “sustainable” and “green” efforts have fit largely into current consumer practices. This limits the access, and benefits to those with the awareness and means to enjoy them. Arguably, corralling those who have accepted over-consumption as a societal norm is a logical approach to stemming the tide of rampant resource exploitation. But it leaves out large segments of our communities.


In describing people with a newfound interest in “sustainability” and “green” the use of the term “people” is a bit of a misnomer. “People” facing tough environmental choices in a contemporary environmental context refers, as a descriptive term for those until recently, enjoying the mitigating benefits of wealth and power. To a certain extent, wealthy and middle-class Americans have enjoyed the buffering effects of privilege. They have not been compelled en masse until the recent aberrant inflation in

energy costs to alter their consumption patterns since the OPEC oil crisis of the 1970’s. This is the dominant group that populates fast growing suburbs, uses the immense auto-dependent transportation infrastructure and drives the consumption of disposable products that feed landfills and waste incinerators (predominately in communities of color). Meanwhile, there have been “other people” who have been attuned all along to the costs and burdens of consumption in a climate of scarce resources. In America, the poor and people of color have historically borne disproportionate burden of risks associated with environmental degradation.

The modern Environmental Justice Movement (EJM) emerged as the first environmental mass movement originated and led by people of color. EJM offers salient critiques of the American mainstream environmental movement that remain relevant in the current context. Dorceta Taylor presents a compelling argument suggesting that the very definition of “the environment” can be an exclusionary act. Historically, the mainstream environmental movement was more concerned with the preservation of unbuilt landscapes. This position simultaneously numbed environmentalists to the very real environmental issues plaguing urban areas, and detached city dwellers from the merits of environmental consciousness. EJM’s significant contributions to the mainstream environmental movement include the notion that the environment is “where we live,” not just “out there” in the wilderness.

There is a similar need to broaden the definitions of “sustainability” and “green” design. The United States Green Building Council (USGBC) offers a transformative framework for educating designers and builders in best sustainable practices called Leadership in Energy and Environmental Design (LEED) certification. LEED is making a significant impact in removing barriers to awareness and fueling market forces to make sustainable practices accessible to those engaged in the built environment. However, their training sessions and status-conferring certification are the extent of their formal engagement with communities. These practices exclude people who lack the means to build projects and those who cannot participate in training sessions. These practices are barriers that have historically excluded the poor and people of color.



An aerial photograph of a residential neighborhood, showing various houses and streets. The image is overlaid with a semi-transparent blue filter. A vertical white bar is on the left side of the image, and two white text boxes are overlaid on the right side.

There is a need to engage in a dialogue about what constitutes a “sustainable” or “green” solution. Is it merely technical expertise applied to the existing building arts? Or can it be a more substantive definition that requires overt considerations of economic, social, and equity issues? And is it fair to suggest that all of this work needs to focus on engagement with a more inclusive population? The benefits of expansion are evident. The poor and people of color in America pay the highest percentage of their incomes on shelter, energy, food and transportation. Any increase in these basic living costs can push families into poverty. The short and long-term savings of sustainable technologies could have a much deeper impact on these communities, enabling wealth formation and micro-investments. The advancement of the poor and people of color help us all.

The First National People of Color Environmental Leadership Summit of 1991 produced a series of EJM principles, one of which is critical to overcoming this disconnect between “sustainability” and communities of color; “We speak for ourselves.” Community design, emerging from efforts by urban planners during Franklin

D. Roosevelt’s “New Deal,” carried through to “Philadelphia Green” and the Community Design Center (CDC) Movement, has long held the value of empowering people to make their own environmental decisions. The overlap between participatory design techniques and sustainable design awareness is emerging as a key body of knowledge. As Randolph T. Hester argues in *Design for Ecological Democracy*, participatory design in the public realm is a critical step towards merging the values of direct democracy and environmental awareness. By using the design process to create forums within which people can define their own issues and opportunities, develop their own capacities for environmental change, and learn best practices in “sustainability” by applying them to community-defined issues, community designers are enabling positive and just environmental change. This is the potential of participatory design in the 21st century.

In New York, Sustainable South Bronx (SSBX) has led the way in linking superficially unrelated community issues to “green” solutions. Sparked by an unjust city proposal for a riverfront toxic landfill, the perception of the community as



citywide dumping ground galvanized the South Bronx. Plagued with decaying infrastructure, lack of safe streets and parks, and a declining job base SSBX successfully wove an environmental thread through all of these issues. They attracted people outside of mainstream environmentalism, and through the fusion of social imperative and “green” technology, forged radical new directions. They currently certify workers in the installation of solar panels and green roof technology, host on-site rapid prototyping workshops sponsored by national industrial design leaders using area waste as raw material, and train residents in environmental stewardship. This is resulting in the development of human capital in the community, and redefining the notion of “sustainability.”

The experience of SSBX and dozens of similar organizations across the country offer resonant examples for designers concerned with re-appropriating the sustainable and “green design” movements to serve communities in need. SSBX establishes the relevance of these approaches, not in the convenience of their products to those who can choose otherwise, but in the necessities and opportunities satisfied by those with few or no choices. It celebrates the creative and integrative potential of currently marginalized people; historically the ones who have life circumstances necessitating radical thought have fueled the

spirit of invention. And it legitimizes environmentally conscious thinking, not merely as the accumulation of more products, but as substantive and transformative tools that enable a higher quality of life.

As more of these efforts emerge and coalesce, one hopes that there will be community self-assessment tools that authorize everyday people to evaluate the costs and benefits of these approaches. Although “expert” practitioners and educators have important roles to play, peer-to-peer communication between similar communities remains a key tool in community acceptance of change. Transformations authored, maintained, and monitored by their own community advocates represents the closing of the necessary feedback loop to bridge the gap between communities of color and the green design revolution.

*“I’m impressed by people who have the courage to customize valuable objects – knowing that they have reduced that objects monetary value to the outside world, but have increased its value to themselves.”*

participant from Option Shift Control symposium culture probes

#### SELECTED BIBLIOGRAPHY

Carter, Majora “Investing in Individuals and Communities: Sustainable South Bronx”, Keynote Address, *Institute for Emerging Issues Forum*, 2008.

Hester, Randolph T. *Design for Ecological Democracy*, MIT Press, 2006.

Taylor, Dorceta E. “Blacks and the Environment: Toward and Explanation of the Concern and Action Gap between Blacks and Whites”, *Environment and Behavior*, Vol.21, No.2, 175-205,1989.



Impressions, thoughts... (even gut reactions):

## Culture probes

Customization comes down to  
choice you make - the more  
choices you have - the more  
I have customized my life  
I have concerns over the  
choices available to me (w/



*any*  
*e*  
*I*  
*de*  
*of*

opinions.



# Design Anthropology

*How a profession's specific skills can inform another*

*a conversation with* ELIZABETH TUNSTALL

As attention to the issues of community, global culture and experience increasingly define contemporary design practice, what we know about people and their sense of agency in a “connected” and technological world is essential.

*Elizabeth (Dori) Tunstall is a design anthropologist and strategic planner. Holding a Ph.D. in cultural anthropology, she uses her background to help clients make better decisions by grounding their business and design assumptions in people's actual attitudes, behaviors and actions. She is a leader in bringing together the fields of anthropology and design.*

The fact that anthropologist Elizabeth (Dori) Tunstall teaches in design at the University of Illinois at Chicago is no accident or anomaly. Neither is her very visible presence in the work of professional design offices, scholarly conferences on design, or initiatives of our professional associations.

The Department of Graphic Design here at NC State invited Tunstall to conduct a workshop on “community” as a precursor to a master’s project on designing for learning communities. Using a model she developed for industry, Tunstall focused student attention on a number of issues that define the nature of communities, whether physical or virtual. Historical conscious-



# consciousness

■ 29/35

ness, according to Tunstall, is people's understanding of where they come from, who they are, and where they are going. *Life goals* embody what matters most to the members of the community. *Community structure* addresses how the collective makes decisions and how individuals fit in and contribute. *Relationships* are the means through which people gain understanding of common values and establish trust. And *agency* is the degree of the individual's control or influence over the things that matter to the community and themselves. This expanded definition provides great insight for designers and adds to our understanding of the dimensions of participatory culture that now define the context in which we design.

This interview with Tunstall makes a case for what anthropologists can contribute to a design team that is not the typical expertise of design professionals.

Do you think designers are prepared to do ethnographic research? In your lectures, you have mentioned that anyone thinks he or she can be an ethnographer, but, do you think that SOME designers are capable of this or are designers in general venturing into territory where they shouldn't?

Anyone with training in ethnographic research is prepared to do ethnographic research. It is not a matter of being a designer or an anthropologist. It is a matter of developing competency in a skill set, as one does in typography or injection molding.

Does design thinking embody a framework to allow for such research?

No one has provided me a good definition of what design thinking is, so I cannot tell. When I ask people, who use the term, they seem to be referring to interpretation, iteration, creativity, which is basically the hermeneutical intellectual tradition. If design thinking is the contemporary expression of hermeneutical approaches to knowledge where the "texts" are visual or tactile artifacts, then that tradition is grounded in research.

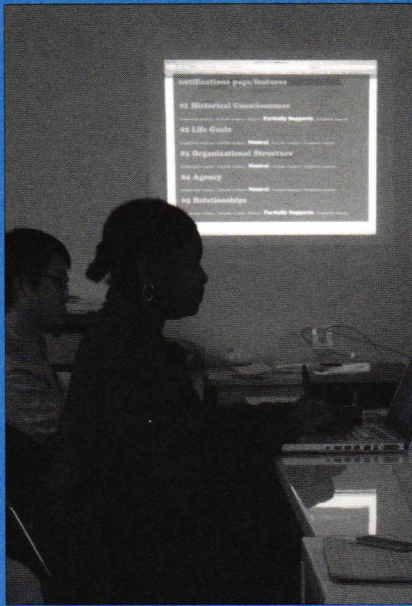
What are some interesting projects going on in design that are exploring participatory design?

Depends on what you mean by participatory. Participatory design is beyond the exploration stage; it has been around since the 1960's. Most large design, marketing and innovation firms are doing some kind of participatory design in terms of having people frame, evaluate and refine design solutions through card sorting, cognitive mapping, concept evaluation, etc.

There is some debate going on in the design field about the merits of customization and how that may or may not allow for self-empowerment. From your perspective how do you see the role of customization affecting communities? Customization such as: Web 2.0, modular living spaces, aesthetic product customization, etc.

As an anthropologist, I have observed people who customize the aesthetics and functional use of products. The challenge has been to build that into the design of products for a profit. Customization does not affect communities; people affect communities. There is not a direct causality except as people use the products as symbols of their identities and define who is inside or outside of the community.





Dori Tunstall leads a workshop on “community” with Graphic Design graduate students at NC State University.

What would you consider to be the key aspects defining a design anthropologist?

Seek to ask the question of how the processes and artifacts of design help define what it means to be human. This means having a critical perspective on design based on a deep understanding of its current and future impact on an individual, as well as societal level. It also means that the design anthropologist understands his or herself as the instrument of data collection based on the ability to connect with people in significant ways. It's not about extracting data, but about engaging in shared human meaning.

In recent years, the design profession has paid more attention to user-centered approaches, coming closer to other fields such as anthropology. Have any positive correlations been observed between the two that might hint at a picture of their future relationship?

There is nothing recent about design and anthropology's engagement with one another. In the 1940's, the Eameses suggested anthropology as a course of study for design in India. Anthropologists have been studying material culture since its beginning. Design and anthropology found deeper common interests in the 1970's, 1980's, and 1990's as both sought to deal with the twin process-

es of globalization and digitalization. As I travel around talking about design anthropology as an academic field of study, as opposed to industry-based, I run into lots of people who have studied both. Now there seems to be more collaboration between the two fields in other areas besides high tech consulting and marketing as both designers and anthropologists want to have a more positive impact on the world.

You have always identified as a classically trained anthropologist. Why is this important to signal? How has this training aided you in the definition of your current position between the two fields?

Most anthropologists involved in design come from a socio-cultural anthropology background. This is an academic culture that values solitary work (although within a community), textual expression, and often an emphasis on meaning over function. By classically trained, I come from the four-fields Boasian tradition of Margaret Mead, Ruth Benedict, Zora Neale Hurston, which means I've studied biological human difference (which helps when thinking about ergonomics and human factors), linguistics (good for communication design), archaeology (good for product design), as well as socio-culture. For physical anthropology, I had to learn to sketch and see with visual nuance to determine the difference between one bone and another. In archaeology, I had to work in interdisciplinary teams. So I had to adapt less to working in the design world than some of my anthropologists without this training.



#### EMIC PERSPECTIVE

*Refers to the categorization of things according to the way in which members of a certain society classify their own world. It is the way a society's own culture and language articulate and explain its own reality.*

#### ETIC PERSPECTIVE

*Refers to the categorization of things within a certain society from an outsider's point of view. The approach works off the idea that an objective point of view can be achieved outside of any personal cultural experience.*

#### PROXEMICS

*A concentration of non-verbal communication concerned with spatial aspects of human interaction, particularly with how culturally defined uses of space can affect the effectiveness of communication.*

Do you see classic ideas and debates of cultural anthropology, such as those of participant observers, subjectivity/objectivity of the researcher, **emic/etic** debates as having any bearing of the contemporary state of the design discipline?

Not the debates per se, but the implications of the debates in terms of validating why a client should accept a designer's ideas. They are implicit in the reason why the design discipline is required to conduct research, because clients are less willing to accept an idea without "objective" data from the target humans that show it is not just a designer's whim.

Do you see the awareness (as in knowing that it is being looked at) of the user/community as a key variable in applying design solutions? Does it matter that users of design solutions (communication, objects, ideas) are conscious of them? Is their realization of involvement key in the project? (focus groups, culture probes, etc.)

People are very self-conscious these days and have a higher awareness of design and research in general. This awareness is great because it allows them to become more equal co-participants in the creation of design solutions.

As both a designer and anthropologist, how do you approach identifying the key informants? From your perspective, what should we call these others now? Users? Consumers? Participants, etc.? All labels have deep-rooted cultural implications, but the terms are changing. Where do you see the language going?

I never use the term informants. I use the more long-winded term of people with whom you are engaged or people whom you are studying. In technical research conversations, I call them research participants. I think the language then depends on the context. For marketers, they are consumers. For high-tech consultancies, they are users. There is no convergence on one term, nor should there be in that the meanings of each have specific resonance within a design culture.

How should designers be able to think of ideas of context and **proxemics** and have their work do something about it.

The thinking about context and proxemics should be the ethical center of design practice. How would this artifact operate in another time or place? What is my relationship as the creator to that time and place? These should be the questions designers ask before creating anything if they want to be self-reflective in the practice and avoid many of the ethical pit falls that have burdened design before. What makes me optimistic is that designers are asking those questions, but I think they can look to anthropology to see what some of the potential answers might be.



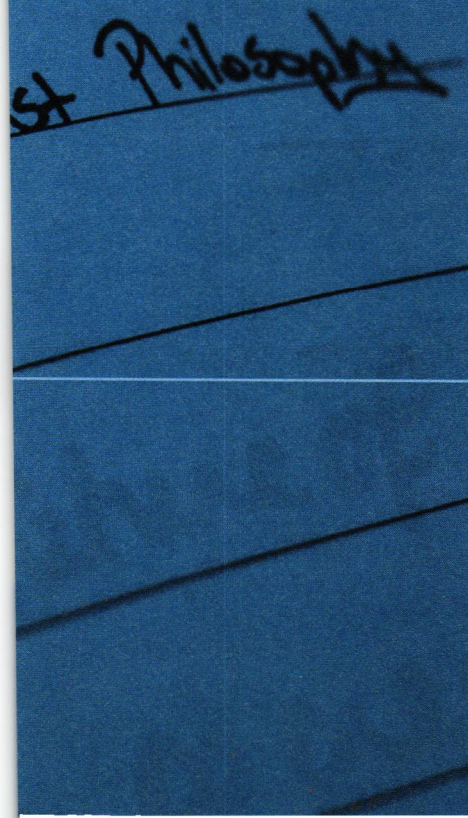
Impressions, thoughts...(even gut reactions):

## Culture probes

Participation is ~~not~~-existence. ~~It~~ is  
not-existing. My physical body dies and  
non-existent. But if I participate, it  
if I recapture beauty, I become  
worth remembering. → Man



views.





In what ways are designers, architects and artists collaborating with people beyond their own discipline?



THE STUDENT PUBLICATION OF THE COLLEGE OF DESIGN  
VOLUME 33

NORTH CAROLINA STATE UNIVERSITY

**MARVIN J. MALECHA, FAIA**  
*DEAN OF THE COLLEGE OF DESIGN*

EDITOR: **MARTY MAXWELL LANE**  
EDITORIAL FACULTY ADVISOR: **WILL TEMPLE**  
DESIGNERS: **MARTY MAXWELL LANE,**  
**REBECCA TEGTMEYER AND ALBERTO RIGAU**

PUBLICATION ADVISORY COMMITTEE:  
**CHAIR: DENISE GONZALES CRISP,**  
*ASSOCIATE PROFESSOR OF GRAPHIC DESIGN*  
**SHERRY O'NEAL,**  
*DIRECTOR OF COMMUNICATIONS*  
**ART RICE,**  
*ASSOCIATE DEAN FOR GRADUATE STUDIES,*  
*RESEARCH AND EXTENSION AND*  
*PROFESSOR OF LANDSCAPE ARCHITECTURE*

This volume was printed and bound in the United States  
by Theo Davis Printing in Zebulon, N.C. The primary typefaces  
are Archer and Whitney designed by Hoefler & Frere-Jones.

Published by NC State University College of Design

© Copyright 2008  
No portion of this book or its content may be reproduced  
without written consent from The College of Design,  
The Student Publication, and its contributors

ISSN NO. 0078-1444  
LC 04417343



#### PUBLICATION THANKS

The publication staff would like to thank the entire College of Design for its increased support of interdisciplinary teams and exploring the potential of participatory culture as a whole. We would like to thank Dean Malecha for his leadership, continued support of the Student Publication and his faith in the students. Sherry O'Neal has been an amazing liaison for us in the entire process of producing this publication. And finally, this publication would not exist in this unique form were it not for the support and guidance of Frank Pulley of Theo Davis Printing.

#### EDITOR THANKS

First and foremost, I would like to thank my design team, Rebecca Tegmeyer and Alberto Rigau. This publication has been made truly in the spirit of co-creation, from beginning to end. Their intelligence, creativity, and explorations have been poured into this publication. Meredith Davis, Sherry O'Neal, Martha Scotford and Will Temple have been invaluable as editors and mentors in this process. Above all else, I would like to thank Denise Gonzales Crisp for her catalytic spirit. As the professor of our graduate studio last fall, Design as a Cultural Artifact, and leader of the graduate symposium, Option Shift Control, she is responsible for the initial spark that led us to this extended discussion. Denise has truly inspired me to be confident in questioning, speculating and exploring through my design work and research.



NC STATE UNIVERSITY  
COLLEGE OF DESIGN

**PUBLICATION CAMPAIGN**

THE COLLEGE OF DESIGN WISHES  
TO THANK THE FOLLOWING  
DONORS FOR THEIR GENEROUS  
SUPPORT OF THE STUDENT  
PUBLICATION CAMPAIGN.  
WITHOUT THEIR COMMITMENT  
WE WOULD NOT HAVE BEEN  
ABLE TO REVIVE THIS  
IMPORTANT PUBLICATION.

THESE GIFTS AND PLEDGES  
WERE INSPIRED BY A SUBSTAN-  
TIAL CHALLENGE BEQUEST FROM  
**FRED AND BOBBIE ADAMS.**

SPECIAL THANKS AS WELL TO  
THE PUBLICATION CAMPAIGN  
COMMITTEE LED BY  
**STEVE SCHUSTER, AIA, (1973)**  
OF CLEARSCAPES AND  
**DAVID RAMSEUR, AIA, (1968)**  
OF RAMSEUR-PETERSON  
ARCHITECTS.

THE COMMITTEE INCLUDED  
**JOHN CORT, AIA (1967),**  
**LIGON FLYNN, FAIA, (1959),**  
**DON LEE, FAIA, (1961),**  
**WES MCCLURE, FAIA, (1969), AND**  
**LLOYD WALTER, FAIA, (1960).**

IF YOU WOULD LIKE TO  
MAKE A GIFT TO THE STUDENT  
PUBLICATION ENDOWMENT  
PLEASE CONTACT **CARLA**  
**ABRAMCZYK, ASSISTANT**  
**DEAN FOR EXTERNAL**  
**RELATIONS AND DEVELOPMENT**  
AT (919) 513-4310 OR  
CARLA\_ABRAMCZYK@NCSTU.EDU.

**\$100,000**  
NC ARCHITECTURAL FOUNDATION

**\$10,000 - \$25,000**  
JOEL CLANCY  
CLEARSCAPES  
PERKINS & WILL  
SHERWOOD L. WEBB AND ROBERTA SOFTY WEBB

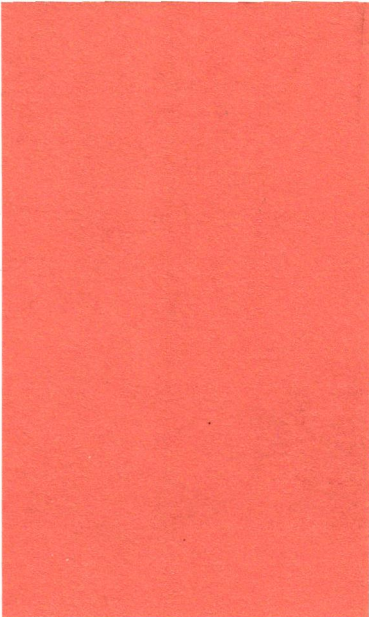
**\$5,000 - \$9,999**  
CLANCY & THEYS CONSTRUCTION  
CORT ARCHITECTURAL GROUP PA  
CT WILSON CONSTRUCTION COMPANY  
DIXON WEINSTEIN ARCHITECTS  
LIGON B. FLYNN  
MCCLURE HOPKINS ARCHITECTS  
RAMSEUR-PETERSON ARCHITECTS, PC  
SKANSKA USA BUILDING INC  
WALTER ROBBS CALLAHAN & PIERCE, ARCHITECTS  
LLOYD G. WALTER JR.

**\$2,500 - \$4,999**  
FLAD & ASSOCIATES  
JDAVIS ARCHITECTS PLLC  
HENRY W. JOHNSTON  
LITTLE & LITTLE  
MARVIN MALECHA  
HUNT MCKINNON  
METROCON, INC.  
SKINNER, LAMM & HIGHSMITH, PA

**\$1,000 - \$2,499**  
ABEE ARCHITECT, PA, DALLAS ABEE  
RANDOLPH R. CROXTON  
REGINALD CUDE  
DTW ARCHITECTS & PLANNERS LTD  
HARRY ELLENZWEIG  
ROLAND GAMMON  
HOWARD GARRISS  
W. EASLEY AND SUZANNE L. HAMNER  
JEFFREY HUBERMAN  
G. DANIEL KNIGHT JR.  
PRIME BUILDING INC.  
RAMSAY GMK ASSOCIATES, INC.  
JOHN SAWYER ARCHITECTS  
STEC & COMPANY ARCHITECTS  
RODNEY SWINK  
TROXELL ASSOCIATES ARCHITECTURE, INC.  
WILLIAM E. VALENTINE  
WALTER VICK, THE LSV PARTNERSHIP-ARCHITECTS/PLANNERS-AIA  
W.R. WATKINS ARCHITECTURE

**\$100 - \$999**  
FRED AND SHERRY ABERNETHY  
BONEY PLLC  
CHARLES H. BONEY  
DAVID BURNEY  
SLOAN BURTON JR.  
CBSA ARCHITECTS  
COTHRAN HARRIS ARCHITECTURE  
BERTRAM ELLENTUCK  
IRWIN E. JONES  
DON KUNZE  
ELIZABETH B. LEE  
BRUNO LEON, ARCHITECT  
LUCIEN ROUGHTON ARCHITECTS  
MICHAEL MOOREFIELD ARCHITECTS, PC  
MURRAY WHISNANT ARCHITECTS  
SHERMAN PARDUE  
J.J. PETERSON JR.  
CHARLES M. SAPPENFIELD  
JAMES STEVENSON  
CHARLES H. WINECOFF  
WINSTEAD WILKINSON ARCHITECTS PLLC





Are you more willing to contribute to a collaborative project only if you will be individually recognized?

