ABSTRACT

Richard Buchanan, co-editor of *Design Issues*, the international journal of design history, theory, and criticism, argued that designers possess skills that are useful to "discover new relationships among signs, things, actions, and thoughts."[1] Like Buchanan, Alastair Fuad-Luke, author of *Design Activism*, purported that "design's ability to operate through 'things' and 'systems' makes it particularly suitable for dealing with contemporary societal, economic, and environmental issues," such as the design innovation firm IDEO.[2] Designers' abilities to use visualization, divergent and convergent thinking, problem-solving activities, and user engagement research methods can certainly help provide a broad perspective of the ails of social problems. Although, design professions must reevaluate how its methods, tools, and ideas may not be broadly applicable for complex social problems since the "scale of the challenge will move us beyond our training."[3] In particular, Meredith Davis noted that graphic design training fundamentally "views complexity as a problem to be overcome through reductivist artifacts, not as an inevitable and pervasive attribute of life in the post-industrial community."[4] As a remedy, institutions are beginning to offer graduate education to equip students with the means to address social problems with design. However, graphic design generally lacks well-defined, scalable methodology to examine and respond to complex social problems in specific domains, such as government and health.

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[1] Richard Buchannan, "Wicked Problems in Design Thinking," *Design Issues* 8, no. 2 (Spring, 1992), 14.

[2] Alastair Fuad-Luke, *Design Activism: Beautiful Strangeness for a Sustainable World* (London; Sterling, VA: Earthscan, 2009), 2; Bruce Nussbaum, "Innovation vs. design–the British Design Council weighs in," *Businessweek*, November 30, 2005, accessed June 3, 2012, http://www.businessweek.com/innovate/NussbaumOnDesign/archives/2005/11/innovation_vsde.html. Nussbaum stated that IDEO has moved beyond traditional product design methods and output "to systemizing design methodology for all kinds of arenas, including social problems."

[3] Shel Perkins, *Talent is not enough: Business secrets for designers*, (Berkeley, CA: New Riders, 2006), 274.

[4] Meredith Davis, "Toto, I've got a feeling we're not in Kansas anymore…," (keynote presentation, AIGA Design Educators Conference, Boston, MA, April 4–8, 2008)

My thesis investigates the role of graphic design in the government public sector to deal with varying complexities of social problems. In particular, my research question focuses on,

WHAT GRAPHIC DESIGN METHODS ARE USEFUL TO IMPROVE PUBLIC HEALTH SERVICES FOR THE HOMELESS IN PITT COUNTY, N.C.?

My investigation demonstrates that there is no single design methodology to address all levels of complexity of a social problem. Moreover, being able to recognize opportunities for incremental design interventions may be paramount to systematically solving a social problem. Over a six-month period, the project shifted through three different phases aimed at addressing homelessness by responding to situations as they emerged rather than a pre-planned course of action:

- Phase 1) *Service design*: Redesigning the Greenville Community Shelter Health Clinic service experience
- Phase 2) *Human-centered design and visual mapping*: Engaging community leaders to visually map the complexity of homeless public policy and collaboration amongst constituents, citizens, community organizations, and service providers
- Phase 3) *Responsive practice*: Devising incremental resolutions for issues of social inclusion and information access

UTILIZING MULTIPLE DESIGN METHODS TO RESOLVE SOCIAL PROBLEMS

A Thesis Presented to the Faculty of the School of Art and Design

East Carolina University

In Partial Fulfillment of the Requirement for the Degree

Master of Fine Arts

by

Keon Pettiway

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DEDICATION

Everything would be impossible without God.

To the elders whom are no longer here – Ella Jenkins, Thomas Jenkins, Johnny "Billy Boy" Petteway, and Gladys Petteway you taught me invaluable life lessons and how to have character.

To my lovely wife – Charlene – you've been a solid rock.

To my family, you are my inspiration.

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CHAPTER 1: INTRODUCTION

GRAPHIC DESIGN SEEKS TO DEVELOP A SOCIALLY RESPONSIBLE PRACTICE

The discourse of socially responsible design suggests that designers should not be content with only being "intermediaries between information and understanding," but should also strive to satisfy human needs.[5] In 1972, Victor Papanek's challenged product designers to adopt a socially responsible design practice when he argued that "design has satisfied only evanescent wants and desires, while the genuine needs of man have often been neglected."[6] Twenty-eight years later, the *First Things First Manifesto 2000* challenged the graphic design profession to reverse inessential priorities of commercial work to favor "more useful, lasting and democratic forms of communication—a mindshift away from product marketing and toward the exploration and production of a new kind of meaning."[7]

Recently, the graphic design profession has made proactive efforts beyond discussion to establish socially responsible models of practice, which Powell calls an "ambitious aspiration, but one that is an unmistakable priority for the emerging generation of young designers now entering the profession."[8] The AIGA launched the Design for Good initiative in 2011 "to provide designers with opportunities to work together with other community leaders on solving complex problems that benefit from the power of creative solutions."[9] Additionally, Dr. Suguru Ishizaki of Carnegie Mellon University was awarded the AIGA Design Faculty Research Grant for his research project titled, *Making Design Research Matter:*

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[5] Douglas Powell, "Making Change a Priority," August 5, 2011, accessed June 15, 2012, http://www.aiga.org/making-change-a-priority.

[6] Victor Papanek, *Design for the real world: Human ecology and social change*, (Chicago, IL: Academy Chicago, 1985) 15.

[7] First Things First Manifesto 2000," *Eye Magazine* 33 (Autumn 1999), accessed November 23, 2011, http://www.eyemagazine.com/feature.php?id=18&fid=99.

[8] Powell, "Making Change a Priority."

[9] "AIGA Launches Design for Good to Harness Creative Talent for Social Good," AIGA, accessed May 28, 2012, http://www.aiga.org/news-20111027. American Institute of Graphic Artists.

Toward a framework for socially-responsible design research. Perhaps the most significant evidence is the emergence of new graduate programs for socially responsible design. In Fall 2011, Maryland Institute College of Art (MICA) launched the Master of Arts in Social Design to equip designers with "investigative, problem-solving and project management skills needed to affect social challenges."[10] Pacific Northwest College of Art (PNCA) also launched a new Master of Fine Arts in Collaborative Design program in Fall 2011 to engage students with methods and tools for 'wicked' problems requiring "dynamic design practices that take into account the concerns of a diverse range of human and non-human stakeholders."[11] In Fall 2012, School of Visual Arts (SVA) will open doors to its first crop of graduate students in the new Master of Fine Arts in Social Innovation and arm them with "principles and ethics of social innovation as filters for understanding and as a discipline for engaging with and improving the world through design."[12] Additionally, SVA began offering a six-week summer intensive program in 2010, named Impact! Design for Social Change, to help students and professionals either "conceive and execute their own projects for social change with a focus on funding projects that are not client-based" or engage in a team-oriented summer project to address social needs in a particular community.[13]

The programs' titles vary, which is characteristic of how the terms are used interchangeably to denote the application of creative problem solving for social issues.[14] A common denominator is the recognizable

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[10] "Overview," Maryland Institute College of Art Masters of Social Design, accessed July 5, 2012, http://www.mica.edu/Programs_of_Study/Graduate_Programs/Social_Design_%28MA%29/Overview.html
[11] Pacific Northwest College of Art, "PNCA Launches MFA in Collaborative Design," press release, December 6, 2010, accessed March 5, 2012, http://pnca.edu/news/press/5406.
[12] "Frequently Asked Questions," School of Visual Arts Design for Social Innovation Program, accessed July 5, 2012, http://dsi.sva.edu/faq.
[13] "Worldstudio and School of Visual Arts launch Impact! Design for Social Change," *Worldstudio*, (blog), February 11th, 2010, accessed July 5, 2012, http://blog.worldstudioinc.com/worldstudio-and-school-of-visual-arts-launch-impact-design-for-social-change.
[14] Stephanie Murg, "Worldstudio's Mark Randall on Social Design, Woodsy the Owl, and Making an Impact," *Unbeige*, February 10, 2012, accessed June 2, 2012, http://www.mediabistro.com/unbeige/worldstudios-mark-randall-on-social-design-woodsy-the-owl-and-

need to provide designers with methods, tools, and ideas to effectively examine and develop solutions for a wide range of social problems in various domains. The graduate programs seek to shape what George Mulgan, director of the Young Foundation, views as underdeveloped skills needed to address social complexities, such as research, evidence, economics, understanding sociopolitical contexts and power, management, integration of interdisciplinary theory and field experience, and implementation of large-scale projects.[15]

DESIGN INTERVENTIONS FOR SOCIAL PROBLEMS VARY IN COMPLEXITY

While many social problems may be compound issues, not all design interventions or solutions must be complex. For example, 5ifty and 5ifty, a "humanitarian creative studio" based in California, does not respond to social problems by being in the field, "but rather in the studio as web designers–architects in the digital arena who create platforms for companies and individuals to tell their stories."[16] 5ifty and 5ifty is not "out to save the world, but to tell the world of those who are."[17] Stefan Sagmeister, principal of Sagmeister Inc., worked with Ben Cohen, co-founder of Ben & Jerry's ice cream, on a political lobbying campaign initially focused on cutting "15 percent of the US military budget and move it over to healthcare and education."[18] Sagmeister developed branding strategies to promote the "Move our Money" campaign, including a range of information graphics in the form of pocket-sized cards, pens, mugs, inflatables, t-shirts, and bus wraps. While it may seem that Sagmeister's role in public policy may have been relegated to visual artifacts, he noted that the five-year lobbying campaign was more complex than tasks like

how-to-make-an-impact_b19499. According to Mark Randall, chair of Impact! Design for Social Change program, social design, which he describes as "design thinking and creativity to improve the human condition and to ensure a sustainable future for us all," is slowly being defined.

[15] George Mulgan, "What is good social design?," (keynote presentation, Design Management Institute 14th annual European conference, London, UK, September 7–8, 2010).

[16] "Home," 5ifty and 5ifty, accessed July 6, 2012, http://www.fiftyandfifty.org/index2.html. 5ifty and 5ifty developed web sites for "Invisible Children", "charity: water", and other social campaigns.

[17] Ibid.

[18] John Cranmer and Yolanda Zappaterra, "Stephan Sagmeister," *Conscientious Objectives: Designing for an Ethical Message*, (Mies: RotoVision, 2003), 32.

designing "CD covers, where the need of the effectiveness of a design is rather dubious."[19] "Move our Money" initially targeted military spending, but the campaign shifted focus after the September 11, 2001 terrorist attack in the United States. As a result, "True Majority" was developed to continue similar goals of the "Move our Money" campaign by creating a system to deliver unheard citizen opinions to their political representatives. Branding and design strategies for the campaign changed radically as plans evolved, which made the project more demanding. "As with many politically oriented groups, situations, requirements, and goals evolved for major directional design changes," but "such changes and radical shifts are not fun," stated Sagmeister.[20] Sagmeister was able to use formal and functional methods, tools, and ideas of design to political lobbying campaign branding, but the situational nature of government policies, constituency goals, and requirements requires designers to employ adaptable creative problem solving for social issues.

CONCLUSION

In the past, designers have contributed vital efforts in the public sector towards improved communication, democratic governance, and public service delivery. Understanding the historical role of design in the government public sector may help social designers develop new methods to examine and address complex social problems differently than their predecessors.

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[19] Ibid., 40.
[20] Ibid., 38.

CHAPTER 2: GRAPHIC DESIGN AND THE GOVERNMENT

In 1971, President Richard Nixon asked the federal government to consider how artists and designers could improve agencies and their programs.[21] Overwhelmingly, many agencies suggested that the "federal government needed better offices and better graphics."[22] Designers and artists were sought after to redesign the material aspects of the government, and some made great improvements. However, efforts by AIGA Design for Democracy and the UK Design Council indicate designers have been vital to the government public sector beyond simply redesigning graphics. More importantly, the efforts demonstrate that designers are capable of employing a range of creative problem solving methods according to the situation.

VISUAL RESEARCH: THE FEDERAL DESIGN IMPROVEMENT PROGRAM

Federal department and agency staff were dismayed and delegates were astonished when President Nixon's speech at the 1971 Associated Councils on the Arts annual conference urged Congress to give two large endowments to the arts and that he was going to send a memo to the executive branch departments and agencies about vigorously engaging artists and designers to better federal programs and agencies.[23] Nixon hoped to improve the "visual mediocrity in government design standards."[24] In

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[21] Richard Nixon to heads of federal departments and agencies, 1971 May 26 "Memorandum About the Federal Government and the Arts.," in *The American Presidency Project*, ed. Gerhard Peters and John T. Woolley, accessed May 15, 2012, http://www.presidency.ucsb.edu/ws/?pid=3026#ixzz1yuHmESAK.

[22] "Setting the Standard: The NEA Initiates the Federal Design Improvement Program," National Endowment for the Arts, accessed May 8, 2012, http://www.nea.gov/about/40th/fdip.html.

[23] Michael Straight, *Nancy Hanks: an intimate portrait : the creation of a national commitment to the arts*, (Durham, NC: Duke University Press, 1988), 267. People called the White House to ask if President Nixon was serious about working with artists and designers. They were told that their response "had better not be phrased in the usual double talk! It will be appraised by experts at the Arts Endowment, and their appraisal will be placed on the president's desk."

[24] Donna M. Binkiewicz, *Federalizing the Muse: United States Arts Policy and the National Endowment*, (Chapel Hill, NC: University of North Carolina Press, 2004), 163. We can speculate that his urgent mandate may have been a continuance of the cultural tactics of the Cold War. In *The Cultural Cold War: The C.I.A. and the World of Arts and Letters*, Frances Stoner Saunders addressed the CIA's use

1972, one year after Nixon's address to the Associate Councils on the Arts, the Federal Design

Improvement Program was established and undertook four main goals: hold Design Assemblies to

increase awareness among the federal government and agencies about the value of design; redesign

federal agencies' graphics; revise the Guiding Principles of Federal Architecture to improve federal

buildings; and improve employment evaluation processes to bring professional artists and designers into

federal service.

Under the first component of the program, four Design Assemblies were held from 1972–1978. In 1973,

Ivan Chermayeff, Richard Saul Wurman, Ralph Caplan, Peter Bradford, and Jane Clark, prepared *The

Design Necessity* for the first Design Assembly as a casebook of federally initiated projects in visual

communications, interiors and industrial design, architecture, and the landscaped environment.[25] The

second component of Federal Design Improvement Program, redesigning graphics, was formally initiated

through the Federal Graphics Improvement Program. Designers provided a professional critique of

graphics ranging from ambulances, forms, plans, and other materials. More than 45 agencies received

redesigned graphics.[26]

In 1974, the Department of Transportation (DOT) contracted AIGA to develop a symbol signs program "to

help the average traveler and even more extensively the average pedestrian, find the way to and through

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and funding of art during the Cold War. Nixon was Vice President when the CIA was in heavy operation of the Cold War cultural warfare during the 1950s to 1960s.
[25] Ivan Chermayeff et al., *The Design Necessity* (Cambridge, MA: MIT Press, 1973).
[26] Two of the most notable redesigns are the NASA logo redesign and the Federal Park Systems. Richard Danne and Bruce Blackburn redesigned the NASA trademark, but they also proposed robust graphics standard manual. Over the years, fierce debates have ensued over NASA's beloved 'meatball' versus 'worm' trademark. Currently, NASA employs the use of both trademarks. Massimo Vignelli developed the Unigrid System for publications used by the National Parks Service. The purpose of the Unigrid System is two-fold: organize publication components and determine how publications will be printed.

transport terminals and other large public buildings."[27] To develop the symbol signs, AIGA and DOT conducted visual research by gathering symbol systems that had been used worldwide in various locations, such as airports and the Olympic Games, and adapting or redesigning the symbol signs (Figure 3). AIGA and DOT's effort to create the symbols signs was not a new initiative, however, they sought to devise a system that communicated a range of complex messages and could be legible at various distances.

Figure 1. International Symbols, AIGA, Federal Design Improvement Program, and U.S.

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[27] William R. Meyers, "Symbol Signs: Department of Transportation's Signage System," *Western States Federal Regional Design Assembly* (Washington: National Endowment for the Arts, 1975), 33. An additional 16 symbols were added in 1979. The symbols are currently copyright-free and accessible from AIGA at http://www.aiga.org/symbol-signs.

The symbol signs program and other Federal Design Improvement Programs efforts improved public

communications, but the program eventually came to an end during President Ronald Reagan's term.

Dori Tunstall, organizer of the U.S. National Design Policy, argued that the Americans with Disabilities Act

(ADA) of 1990 is the only major government design policy since the 1972 Federal Design Improvement

Program. Many U.S. designers have likely seen the impact of the Federal Design Improvement Program,

but they may not be aware of the orchestrated relationship between the federal government and

designers during the 1970s. Similarly, people working in the federal, state, and local government and the

broader public sector are likely unaware of the efforts put forth by the government to engage artists and

designers to improve programs, services, and agencies.

POLICY ADVOCACY: U.S. NATIONAL DESIGN POLICY

In 2008, Tunstall organized a National Design Policy Summit to develop a list of policy proposals for a

U.S. National Design Policy. Previous efforts to create a viable design policy failed in the past. During the

Reagan presidency, support for the arts waned and the Federal Graphics Improvement Program lost

momentum. There was little federal support for design during the George W. Bush administration except

Laura Bush's endorsement of the National Design Awards for the Cooper-Hewitt National Design

Museum. The last effort before Tunstall's design policy proposal was under the Clinton administration, but

it was short-lived and grossly under planned.[28] Tunstall believed the time was ripe for another effort as

the U.S. was experiencing an economic downturn and Americans were losing trust in a supposed

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[28] Bradford McKee, "Once More with Feeling: A National Design Policy," Change Observer, accessed June 20, 2012, http://changeobserver.designobserver.com/feature/once-more-with-feeling-a-national-design-policy/9867. Christopher Hyland, Clinton's deputy national political director, sought after Chee Pearlman to devise a roundtable of designers to plan a national design policy. The result of the meeting was a list of three major initiatives ground in innovation strategy, sustainability, and public participation in government through effective tax forms and voting machines. However, Pearlman later stated that the "interesting thing was how quickly it didn't go anywhere," because "there was no place to channel that within the government…there wasn't a place where this lived."

transparent and effective government due to corruption and war. The U.S. National Design Policy is

based on the following ten policy proposals:[29]

1. Formalize an American Design Council to partner with the U.S. Government.

2. Set guidelines for legibility, literacy, and accessibility for all government communications.

3. Target 2030 for carbon neutral buildings.

4. Create an Assistant Secretary for Design and Innovation position within the Department of Commerce to promote design.

5. Expand national grants to support interdisciplinary community design assistance programs based on human-centered design principles.

6. Commission a report to measure and document design's contribution to the U.S. economy.

7. Revive the Presidential Design Awards to be held every year and use triple bottom-line criteria (economic, social, and environmental benefit) for evaluation.

8. Establish national grants for basic design research.

9. Modify the patent process to reflect the types of intellectual property created by designers.

10. Encourage direct government investment in design innovation.

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[29] "Redesigning America's Future: Ten design policy proposals for the United States of America's economic competitiveness and democratic governance," U.S. National Design Policy Initiative, accessed August 23, 2011, http://www.designpolicy.org/usdp/text-only-redesigning-americas-future.html.

Design Policy *for* Democratic Governance		Design Policy *for* Economic Competitiveness	
Design Standards	Policy as Designed	Design Promotion	Innovation Policy
SAFETY QUALITY SUSTAINABILITY INCLUSION cognitive disabilities physical disabilities literacy multilingual	POLICY CREATION agents & implementation structures targets, rules, & tools rationales & assumptions goals & problems ISSUES governance structures institutions & their cultures social constructions SOCIAL CONTEXTS justice citizenship democratic values problem solving	DESIGN CENTERS PUBLICATIONS SHOPS COMPETITIONS EXHIBITIONS	DESIGN INNOVATION R&D output government procurement transfer & diffusion intellectual property HUMAN INNOVATION SME support large enterprise support graduates in higher ed industry employment

Figure 2. The framework of design policy for the US National Design Policy Initiative.

Coincidentally, the U.S. National Design Policy was being developed as Barack Obama won the presidential election. Tunstall, and others supporters of the U.S. National Design Policy Initiative, were probably more optimistic about the acceptance of at least part of the design policy considering Obama's historic application of design for political campaigning, transparency, and democratic governance. It is difficult to tell whether the U.S. National Design Policy effort is still in flux, but it seems to have halted. Nevertheless, the importance of the U.S. National Design Policy is an identification of how design can be of use for nation building, which is slightly different than past solicitation to help the government "meet our commitment to improve the efficiency of government…and reaffirm our concern for the human side of government."30 In an open letter to President Obama, William Drentell stated how design could play a

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30 "Mission," U.S. National Design Policy Initiative, accessed October 30, 2011, http://www.designpolicy.org/usdp/mission./

larger role by stepping beyond, while still implementing, redesigns like those of the 1972 Federal

Graphics Improvement Program.31

SERVICE DESIGN: UK DESIGN COUNCIL

In addition to improving visual communications, creating an environment for democratic governance, and

increasing economic competiveness, design can also improve the delivery of services in the government

public sector. In the UK, the Design Council sponsors a mentoring program, Public Services by Design, to

match designers with "ambitious organisations keen to transform, adapt and improve service delivery" of

public programs.[32] The Design Council worked with Lewisham Housing Options Centre and the London

Borough of Lewisham's policy, strategy and transformation department to explore one question: How can

the experience of using a homelessness service be improved? Designers coached the Lewisham staff on

design thinking and design research methods, such as ethnographic research, brainstorming, prototyping,

and visualization methods, to uncover service experiences and develop co-designed ideas.

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[31] William Drenttel, "A Design-Oriented National Endowment for the Arts," Design Observer, accessed June 12, 2012, http://observatory.designobserver.com/entry.html?entry=7697. Drentell argued that design can "benefit the nation with practical solutions, progressive thinking and citizen-oriented improvements affecting all aspects of civic, cultural and artistic life. Within the context of all the disciplines represented by the NEA, design is uniquely situated to evaluate problems; look at citizen needs; place the problem within an experience base of other categories and industries; rapidly prototype potential solutions; add research modules for evaluation and feedback; introduce metrics to evaluate success or failure; and quickly move toward solutions."

[32] "Transforming public services through expert mentoring," Design Council, accessed May 15, 2012, http://www.designcouncil.org.uk/publicsector.
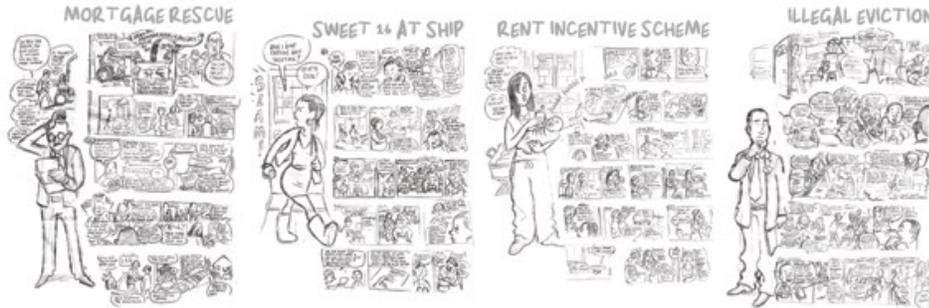
Figure 3. Storyboard prototypes of Lewisham service experience, Cognitive Media.

As a result, the Public Services by Design program has reduced service cost and £368,000 in yearly efficiency savings. Additionally, the public service experience was improved by providing the staff with design methods and tools to continue finding ways to transform service delivery.[33]

CONCLUSION

In 1973, government agencies were skeptical about working with artists and designers when President Nixon delivered his memo to agency and department heads. It was unclear whether art and design could be of any use to improve government communications, services, and governance beyond visual surface treatment. Today, people interested in using design in the public sector for social problems likely face the same sentiments. Peter Gadson, Lewisham's Head of Strategy and Performance, described the barrier and indicated the possibilities of design for social policy: "When you think of design you think about plastic cups, shapes of chairs or the next big innovation–however design in public services is more than that. Design provided a dialogue to shape social policy and to interact and engage with customers and staff to deliver change."[34] The Federal Design Improvement Program, U.S. National Design Policy Initiative, and service design for the Lewisham Housing Options Centre demonstrates a broad range of design methods

[33] "Lewisham Housing Options Centre: Transforming a support service so it better meets user needs," Design Council, accessed June 15, 2012, http://www.designcouncil.org.uk/our-work/leadership/Public-Services-by-Design/Case-studies/Case-Study-Lewisham-Council.
[34] Ibid.

that can be applied to problems in the public sector. However, the scalability of design methods and tools for different levels of social complexity has been largely unexplored. Consequently, there is no fluid model of a social design methodology specifically for graphic designers working across a multitude of public service and policy problems. Since there is little well-defined, adaptable design methodology for various social problems, the best that designers can do is utilize underdeveloped skills to gauge what methods may be more suitable for the challenges they face.

CHAPTER 3: WHAT GRAPHIC DESIGN METHODS ARE USEFUL TO IMPROVE THE DELIVERY OF PUBLIC SERVICES OFFERED TO THE HOMELESS IN PITT COUNTY, NC?

During a conversation in October 2011, a couple of fellow graduate students and I pondered how art and design could be used to resolve social problems. In particular, one of the graduate students from the East Carolina University School of Medicine mentioned that he volunteered at the Greenville Community Shelter Health Clinic and noticed a service delivery issue: *New and returning homeless patients are serviced at the clinic, but there is difficulty in capturing and obtaining patients' medical histories.* Over a six-month period, I investigated issues that created barriers to better services for homelessness in Greenville, NC. My assumption was that improving a public service for human welfare is one way to make social change happen. My investigation occurred in three phases:

- Phase 1) *Service design*: Redesigning the Greenville Community Shelter Health Clinic service experience
- Phase 2) *Journey mapping*: Mapping the complexity of homelessness public policies and strategies through collaboration scenarios
- Phase 3) *Responsive practice*: Dynamically responding to social situations to develop incremental resolutions

PHASE 1) *SERVICE DESIGN*: REDESIGNING THE GREENVILLE COMMUNITY SHELTER HEALTH CLINIC SERVICE EXPERIENCE

Background: Greenville Community Shelter Health Clinic

The Greenville Community Shelter Health Clinic (GCSHC) is a free, walk-in medical clinic operated by medical students from The Brody School of Medicine at East Carolina University. GCSHC physician and medical student volunteers provide basic medical services and referrals two days a week to patients from the Greenville Community Shelter, Inc. programs and any community member seeking medical care.[35] On November 10, 2011, I met with GCSHC co-directors, Ransom Loftis and Colin Smith, to discuss possible opportunities to improve communication between health service providers and homeless patients in the clinic service environment.

Framing the problem: Inaccessibility of patient medical histories effects service delivery

Loftis and Smith mentioned that one of GCSHC's major obstacles is not having patients' up-to-date medical histories. GCSHC staff collects patients' medical histories, but they have no access to documentation of patient's prior visits to other community clinics.[36] Additionally, many of the patients do not provide extensive or current documentation of their medical history. As a result*, the difficulty of effectively tracking patients' medical histories limits GCSHC's ability to meet patients' needs and expectations of diagnosing health conditions.* The problem is exacerbated by gaps in transitioning knowledge about patients' conditions beyond what is documented when GCSHC experiences turnover of

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[35] Greenville Community Shelters, Inc. provides four homelessness services in Greenville, NC: an emergency shelter; transitional housing, financial emergency assistance; and structured apartment living for disabled homeless individuals and their families.

[36] Many of the homeless access healthcare services from different providers and may not have a primary physician(s). Furthermore, some of the homeless migrate to different locations since temporary shelter programs only provide a certain length of stay. The Greenville Community Shelters, Inc. emergency shelter program offers a maximum occupancy of four or ten months depending on the person's circumstances.

physician and medical student volunteers.[37] Loftis and Smith suggested that my contribution could be

redesigning the GCSHC web site to provide an updated clinic visit schedule, important documents for

patients, and online sign-up forms for volunteer physicians and medical students. I indicated that

examining the medical history collection process within the clinic service experience would be worthwhile,

whereby redesigning the web site could possibly be part of an overall innovative strategy to redesign the

service delivery. Service design, a "collaborative process of researching, planning and realizing the

experiences that happen over time and over multiple touch points with a customer's experience," provided

a promising framework to address GCSHC's problem of tracking medical histories to effectively diagnose

health conditions.[38] The aim of using service design was to improve the public health experience by

creating a service environment that fosters long-term relationships between GCSHC volunteers and

patients.[39]

Choosing a Methodology: Service design

Service design is an emerging discipline that can help service organizations improve productivity,

enhance competitive advantage, meet customers' expectations, make use of technology to increase the

possibilities of developing and delivering services, meet the challenges of pressing environmental, social

and economic challenges, and share knowledge and learning.[40] The output of service design's

interdisciplinary methodology comes in varied forms, such as "rather abstract organizational structures,

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[37] Medical students eventually graduate and the clinic is only open when physicians are available.
[38] Steven Heller, "Answering the Call to Service Design: An Interview with Phi-Hong Ha," *AIGA*, November 3, 2009, accessed February 5, 2012, http://www.aiga.org/answering-the-call-to-service-design.
[39] Shelley Evenson and Hugh Dubberly, "Designing for Service: Creating an Experience Advantage," in *Introduction to service engineering*, eds., Gavriel Salvendy and Waldemar Karwowski, (Hoboken, NJ: John Wiley & Sons, 2010), 403–413. Evenson and Dubberly noted that the process to create value for customers and long-term relationships with their providers must happen through an intentional process rather than by happenstance. At GCSH, the high turnover of physician and medical student volunteers and not having a data about other patients' clinic visits weakens the type of long-term relationship that valuable for healthcare services that often service the same people over a period of time.
[40] "Service Design Network Manifesto," Service Design Network, accessed July 12, 2012, http://www.service-design-network.org/content/sdn-manifesto.

operation processes, service experiences, and even concrete physical objects."[41] The processes and

outputs are used to access different perspectives of actors' relations and interactions with the service

(Figure 6).[42] Each actor may have similar or different perspectives of the service experiences, which

requires using a method that recognizes an organization's "inherent culture, values and norms as well as

its organizational structure and processes" as "important issues for the design of services."[43] The actors'

perspectives, needs, and wants are accessed through an iterative, holistic, and systematic process "that

integrates user-oriented, team-based interdisciplinary approaches and methods, in ever-learning

cycles."[44]
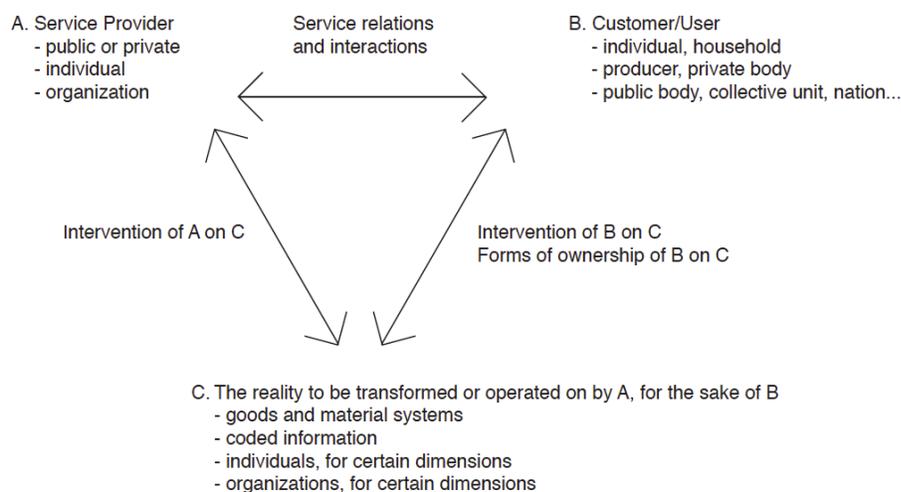
Figure 6. The service triangle as illustrated and defined by Jean Gadrey, 2002.

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[41] Ibid,14. Disciplines like psychology, business, anthropology, and product design are intertwined in service design.

[42] In reference to service design, actors represent the participants involved in the service, such customers and service providers.

[43] Marc Stickdorn and Jakob Schneider, *This is Service Design Thinking*, (Amsterdam: BIS Publishers, 2010). For GCSH, the actors primarily include the people that access the medical services, the homeless and community members, and the people that provide the service, volunteer physicians and medical students.

[44] "Service Design Network Manifesto, http://www.service-design-network.org/content/sdn-manifesto.

Hugh Dubberly and Shelley Evenson describe service design as a five-step fluid design process including observation, reflection, making, socializing, and implementing delivered through three people-centered research phases: exploratory, generative, and evaluative (Figure 7).[45] During the exploratory research phase, designers work with actors and use ethnographic methods, such as "shadowing, participant observation, and contextual inquiry" to immerse in the "context of the inquiry and to provide a deep under-standing of not only the category of people under observation, but also their goals and needs."[46] The primary intent of the exploratory research phase is to frame the design problem, and the second phase, generative research, is used to verify whether the problem has been framed correctly. Generative research is split into two stages: projective, expressive exercises and constructive, concept ideation exercises. The two generative stages are purposed to uncover emotional responses to service experiences and co-design preferred conditions. Generative research provides a framework to evaluate the existing service experience. During the evaluative research phase, resources are assessed to determine if needs and expectations are already being met before modifying the service.
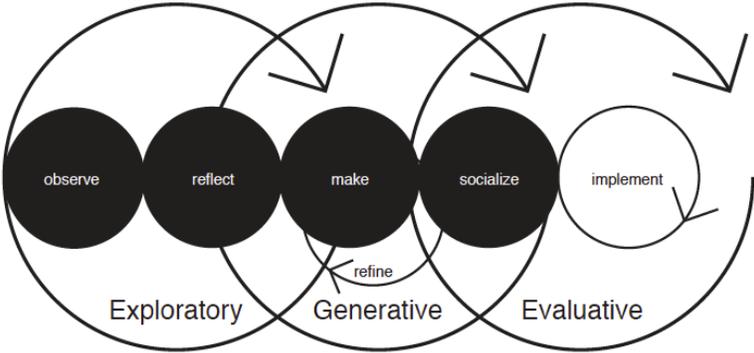
Figure 5. Integrated service design process and people-centered research, Hugh Dubberly and Shelley Evenson, 2010.

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[45] Shelley Evenson and Hugh Dubberly, "Designing for Service: Creating an Experience Advantage," in *Introduction to service engineering*, eds., Gavriel Salvendy and Waldemar Karwowski, (Hoboken, NJ: John Wiley & Sons, 2010). Evenson and Dubberly describes people-centered design as the a design inquiry that starts with the people of the service system as a lens for the exploration.
[46] Ibid., 408.

Applying a Method: Using exploratory research to holistically examine the service experience

Devising an automated electronic system could possibly resolve aspects of GCSHC's service delivery

problem of *effectively tracking patients' medical histories to meet patients' needs and expectations of*

diagnosing health conditions. However, GCSHC needed a holistic view of the clinic service experience

from the perspective of all of the actors involved. GCSHC's services are "intangible performances that are

highly dependent on the physical and social conditions of each single moment of fruition: the service

encounter."[47] The observation step of the service design's exploratory research phase was used to

examine and engage in informal discussions with staff about GCSHC's service experience.[48] The goal of

using exploratory research was to *identify moments of improvement to the staff and patients' interaction*

with each other and the medical history collection process by becoming immersed in the Clinic's physical

and social contexts*.*

In November 2011, I visited GCSHC's facility during busy operation hours to observe staff and patient

interactions at the front desk for an hour.[49] Patients were being serviced before I arrived, but no new

patients signed in or out at the front desk during my observation. As a result, I was unable to get a view of

patient-staff interactions with each other and the medical history collection process during an actual clinic

visit. However, I had ample time to engage in informal discussions with three medical student volunteers

about their experiences. Interestingly, their perspective led to observations of how external factors impact

the internal factors of GCSHC's service delivery issues (Table 1).

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[47] Service Design Network Manifesto, http://www.service-design-network.org/content/sdn-manifesto.
[48] Evenson and Dubberly, "Designing for Service." During the observation phase, designers immerse in the context and community to describe the environment, identify actors' needs, gain a view of the organizations' perception of the service experience, conduct brand audits, and examine market conditions
[49] I couldn't go any further past the front desk due to patient privacy laws and regulations.

Table 1. Medical student volunteers' perspective of how external factors impact GCSHC's internal factors	
Internal Factor	**External Factors**
GCSHC experiences difficulty updating the homeless and other patients from the community about changes to services, hours, or medical rules and regulations. One of the co-directors worked on a strategy to transform the clinic's web site to an information resource for patients and the broader community, but was constrained by time, human resources, and technical tools.	There are constant changes to federal, state, and local homelessness policies and healthcare regulations, which directs how health services are provided by organizations and accessed by patients. Additionally, the policies and regulations may conflict with strategies of non-profit and for-profit organizations, public and private agencies, religious organizations, and other community members that seek to provide assistance for the homeless.
There is little continuity of information and knowledge sharing about patients' needs, expectations, and conditions. For example, one medical student volunteer mimics the role of a caseworker by helping patients with tasks beyond the responsibility of the GCSHC, such as finding public transportation to get assistance from other resource. However, no personal knowledge of individual patients gets strategically transferred to other physicians and medical student volunteers.[50]	Usually, case managers help the homeless with completing applications and finding assistance from various resources. However, a medical student volunteer stated that there is going to be a sharp decrease in local case managers in 2012.[51] As a result, patients have to find other assistance with completing applications and getting help with the particulars of being able to access various services, such as having a mailing address and getting public transportation.
GCSHC does not have extensive documentation of patients' medical histories.	Some patients store medical documents in their pockets and eventually lose the information before their next visit to the clinic.
GCSHC can connect patients to other services or medical assistance, but is unable to further assist patients when they don't complete the necessary documents required by federal, state, and local agencies and organizations.	Poorly designed electronic and paper medical forms minimize accessibility and usability for a range of diverse people with different needs and circumstances.

Conclusion: External social and public policy problems impact service delivery

Through discussions with the medical student volunteers, two possible solutions emerged to serve

GCSHC's immediate need of collecting patients' medical histories: 1) redesign paper and electronic

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[50] Earlier, I noted that GCSHC has a high turnover of volunteers.
[51] The volunteer's claim needs to be checked for factual information.

medical forms to resolve issues of accessibility and usability and 2) develop a product and/or system for patients to safely store and easily show important documents needed to access and keep informed of healthcare and other services. Instead of moving forward with assisting GCSHC redesign their service delivery experience, my focus shifted to using design methodology to examine collaboration and public policy strategies between the many federal, state, and local agencies and organizations that service the homeless in Pitt County. I was inspired to explore the interconnected social and public policy problems of homelessness based on the medical student volunteers' observation that *external forces indirectly and directly impact how GCSHC staff and patients interact with the healthcare system*.

PHASE 2) *JOURNEY MAPPING***: MAPPING THE COMPLEXITY OF HOMELESSNESS**

PUBLIC POLICIES AND STRATEGIES THROUGH COLLABORATION SCENARIOS

Background: Many agencies and organizations provide services to the homeless

The medical student volunteers' perspective on how external factors contribute to GCSHC's service

problems led me to speak with Lynne James, Executive Director of Greenville Homeless Shelters, Inc., to

inquire about services, strategies, and collaborative approaches purposed to tackle homelessness in Pitt

County. James and I had a phone conference meeting four days after my visit to the GCSHC. James

provided information about the interconnected factors of healthcare, employment, and housing issues she

has noticed while working with the homeless. For example, homeless people that receive unemployment

assistance are greatly affected by damages to the U.S. economy, and may not have enough income to

sustain affordable housing. The lack of income snowballs into other issues, such as not enough funds for

continued medical care.[52] Additionally, James gave me a brief overview of four major federal, state, and

local homelessness public policies and strategies: "A Plan: Not a Dream: How to End Homelessness in

Ten Years" (2000); "Our Journey Home: The 10-Year Plan to End Homelessness in Pitt County" (2008);

Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act (2009); and "Opening

Doors: A Federal Strategic Plan to Prevent and End Homelessness" (2010).[53]

Framing the problem: There are conflicting policies and strategies

James indicated that there are many other agencies and organizations servicing the homeless in Pitt

County with individual strategies that either support and/or conflict with the aforementioned federal, state,

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[52] James noted that some of the homeless individuals and families can receive Medicaid, but they don't apply for the program because they are unsure about the process and requirements.
[53] National Alliances released "A Plan: Not a Dream: How to End Homelessness in Ten Years" (2000), Pitt County and the City of Greenville released "Our Journey Home: The 10-Year Plan to End Homelessness in Pitt County" (2008), and the United States Interagency Council on Homelessness released "Opening Doors: A Federal Strategic Plan to Prevent and End Homelessness" (2010).

and local policies and strategies. For example, some independent shelter programs are not affiliated with federal, state, or local entities and may not abide to rules and regulations set forth by governing organizations. It was apparent that a lack of cohesion existed and entities either have the same, similar, or different policies or strategies to combat homelessness. Furthermore, the amount of information about the four major public policies and strategies was overwhelming to process how each relates to the overall interaction of service providers, homeless individuals and families, and community organizations and volunteers, and other concerned citizens. A design method was needed to address two questions:

1) *How do conflicts of policies and strategies impact public services for the homeless?*

2) *How can mapping collaboration scenarios pinpoint opportunities to improve policies and strategies through better partnerships?*

Service design's journey mapping provided a framework to visualize the complexity of homelessness public policy strategies and collaboration scenarios.

Choosing a Methodology: Service Design's Journey Mapping

Journey mapping is used to visually represent an actors' touchpoints with a service to "identify and design opportunities for improvement and innovation" through mapping scenarios.[54] Touchpoints are the cornerstone of services and represent "the points of interaction between the provider and the consumer."[55] The primary focus of visualizing touchpoints is to highlight actors' multiple channels of service experience rather than examining one experience channel. For example, a bank customer's service touchpoints may include ATM machines, web site, customer service representatives, and other points of accessing the bank's services. Journey mapping is useful to examine how federal, state, and

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[54] "Customer Journey Mapping," Engine, accessed July 13, 2012, http://www.enginegroup.co.uk/service_design/m_page/customer_journey_mapping.
[55] Heller, "Answering the Call to Service Design," http://www.aiga.org/answering-the-call-to-service-design.

local homelessness public policies and strategies 1) may affect how people experience services and 2) can be improved through collaborative partnerships between service providers and customers.

Applying a Method: Using concepts of journey mapping to visualize the complexity

I developed a map based on the premise that visualizing different policies, strategies, and collaboration scenarios can highlight how they "touch points" and ultimately all play a role in how people experience homelessness services (Figure 8). The map identifies major policies and actors in the effort to address homelessness and presents collaboration scenarios to clarify what is the state of the collaborative environment. The intent was to put actors, policies, strategies, and scenarios in relative contexts.

Conclusion: Mapping the complexity can invoke deeper discussions to expose other issues

Initially, I developed the map to simply visualize my research findings about the many policies, strategies, and possible collaboration scenarios. However, the map could be useful to invoke deeper discussions to confirm the complexity and reveal other areas of improvement. While creating the map, I read "Our Journey Home: The 10-Year Plan to End Homelessness in Pitt County" and noticed that the Task Force conducted four focus groups in 2008 with people who were currently or previously homeless.[56] Questions posed during the focus groups were primarily relative to their individual experiences. I wondered if the homeless were currently involved with the evaluation, planning, and contribution of innovative strategies now that the 10-Year Plan has been in operation for four years. In addition to engaging in deeper discussion about homelessness policies and strategies, the map was also purposed to ask the following question: *How are the homeless engaged in homelessness policies and strategies amidst conflict and a lack of collaboration between service providers?*

[56] "Our Journey Home: The 10-Year Plan to End Homelessness in Pitt County," The 10-Year Plan To End Chronic Homelessness, http://www.pittcountync.gov/depts/planning/homelessness/plan/plan.shtml.
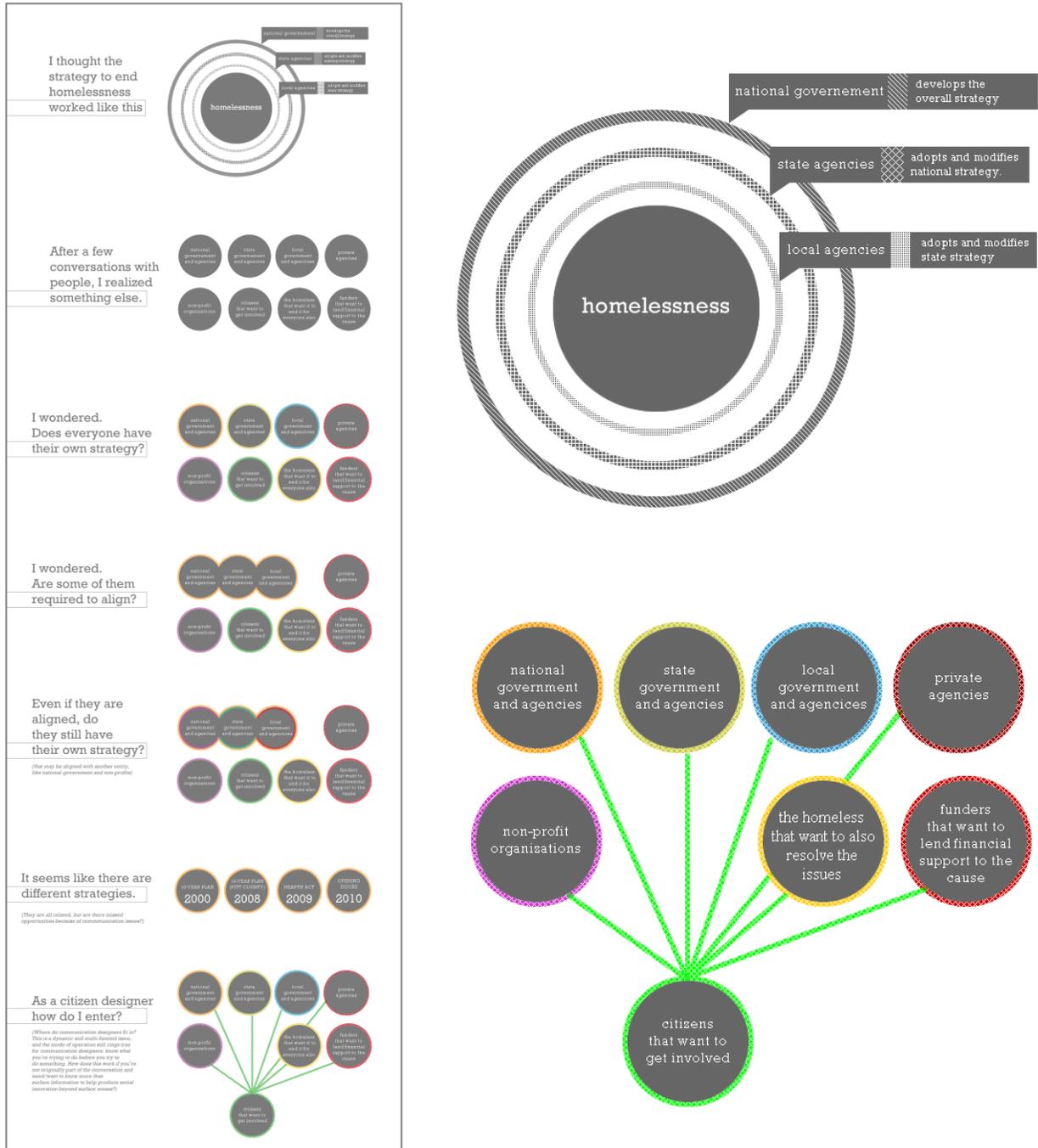
Figure 6. Diagram of homelessness public policy and collaboration scenarios, Keon Pettiway, 2011.

PHASE 3) *RESPONSIVE PRACTICE***: DYNAMICALLY RESPONDING TO SOCIAL SITUATIONS TO DEVELOP INCREMENTAL RESOLUTIONS**

Background: The homeless are not continually engaged in planning and evaluation of services

On November 23, 2011, I met with Paulette White, Project Manager of Pitt County's 10-Year Plan to End Chronic Homelessness, mentioned that the map closely resembled how different policies and strategies are interconnected and sometimes conflict. She indicated that the collaboration scenarios somewhat depicted the partnerships between the homeless, service providers, community and faith-based organizations, concerned citizens, and local businesses, but noted that there is actually less collaboration than desired. In particular, White explained that the Pitt County 10-Year Plan to End Chronic Homelessness Management Advisory Team has not strategically engaged the homeless since 2008. The exclusion of the people most affected by the policies and strategies led to a deeper question: *If the homeless aren't involved as partners or collaborators to improve services then how do service providers know if the services and programs meet needs and expectations?* On February 3, 2012, I posed the same question to Dr. Robert Thompson, co-chair of the Blue Ribbon Task Force responsible for leading the development of "Our Journey Home: The 10-Year Plan to End Homelessness in Pitt County" in 2008.[57]

Framing the problem: Homeless individuals and families are systematically excluded from making contributions to homelessness policies and strategies

White explained that the Pitt County 10-Year Plan to End Chronic Homelessness Management Advisory Team needed to be more proactive in engaging the homeless in planning. Contrastingly, Thompson

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[57] White suggested that I talk with Dr. Thompson because he was working on a research paper, "The Transformation of Collaboration: The Case of Homeless Policy in the United States," about the different federal, state, and local homeless policies.

argued that the homeless do not have the resources or the expertise to synthesize the interrelated issues of homelessness. He indicated that the committee members of the Pitt County 10-Year Plan to End Chronic Homelessness Management Advisory Team and other service providers act as liaisons on the behalf of the homeless.[58] I argued that the homeless are qualified to speak about homelessness issues and should be engaged as partners and collaborators to evaluate and develop strategies to improve the quality of services. One area of service that sorely needs to be co-designed and co-evaluated is access to information about services available to the homeless. Pitt County lacks a well-maintained, accessible, and functional information resource for the homeless. White noted that the lack of an information resource for the homeless is a major gap, and she specifically stated that a formerly homeless individual explained that she would have pursued assistance from the many homelessness services if she had known where they were and how to access them. Devising a collaborative environment that included the homeless as partners and co-creators was vital, but so was developing an information resource so the homeless can be more aware of services available to assist them with their needs. There was no single solution that sufficed for situations of conflicting policies and strategies, interagency and community collaboration, social exclusion, and information access. Each problem was caused by another problem, and different goals and values made it difficult to pinpoint appropriate solutions. Moreover, the interconnected problems were magnified by constant changes to federal, state, and local policy initiatives and regulations. To move forward and begin developing resolutions, a design methodology was needed to respond to dynamic situations rather than a series of planned actions.

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[58] It is important to note that Pitt County 10-Year Plan to End Chronic Homelessness Management Advisory Team is supposed to have at least one person that is currently or formally homeless on the committee.

Choosing a Methodology: Responsive Practice

The Pitt County homelessness problems are 'wicked'. They are a "class of social system problems which

are ill-formulated where the information is confusing where there are many clients and decision makers

with conflicting values, and where the ramifications in the whole system are thoroughly confusing." [59]

Wicked problems should be refined and redefined as more creative solutions are sought[60]. Additionally,

solutions for wicked problems must be viewed as resolutions, which can adapt to the situations at hand

through small incremental changes that may be significant to the overall social problem.[61] During the third

phase of my investigation, I was inspired by responsive architecture as a method to develop incremental

interventions for wicked problems by responding to the social actors. The premise of responsive

architecture is that buildings can mimic living organisms by observing and responding to "their internal

and external environment and change form to suit any situation."[62] The value of responsive architecture to

graphic design is that methods can be "conceived of as systems that change shape to improve the way

people live."[63]

Applying a Method: Dynamically responding to social situations to develop resolutions

The goal of using a responsive practice was to focus on resolving interrelated social issues as they

unfolded rather than a discrete action plan. A responsive practice does not limit the targeted outcome, but

rather continually redefines situations to devise the best intervention at the moment. Responding to

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[59] C. West Churchman, "Guest Editorial: Wicked Problems" *Management Science* 14, no. 4, (December 1967) 141. Wicked problems are more difficult than assumed because there is no stopping rule, there are many explanations for the same discrepancy, there is not definitive formulation, and every problem is a symptom of another problem.
[60] Peter Rowe, *Design Thinking*, (Cambridge, MA: MIT Press, 1986), 41.
[61] In "Dilemmas in a General Theory of Planning," Horst and Rittel noted: "Social problems are never solved. At best they are only re-solved-over and over again."
[62] Lakshmi Sandhana,"Smart Buildings Make Smooth Moves," *Wired Magazine*, August 31, 2006, accessed July 7, 2012, http://www.wired.com/science/discoveries/news/2006/08/71680.
[63] Ibid.

spontaneous situations allowed opportunities to propose alternative resolutions, build trust with constituents, and gain a deeper knowledge of the homelessness problems (Table 3).

Conclusion

A responsive practice was useful to dynamically respond to social and political aspects of the homelessness issues. In the beginning, it was difficult to gauge how the resolutions made an impact on the overall social problem, because much of my designing included meeting with government agencies and community leaders and devising proposals for alternative resolutions. In hindsight, responsive architecture is somewhat valuable for graphic design problem-solving, but an analysis of how responsive architecture is useful to social problems is desired. A responsive, yet strategic framework is needed for designers operating in situations that involve wicked social problems. Such a framework can aid designers with theories, methods, and tools to respond to social problems that are highly uncontrollable and involve many conflicts. Jong S. Jun and William Bruce Storm's theory of social design could be a useful. According to Jun and Storm, "design is an elusive concept," but it can relate people to an array of activities, help "define social reality more accurately," operate as a rational or incremental method, create an environment of continuous social interaction, and involve the "critical consciousness of the actor(s) in creating alternatives to problem-solving."[64] Jun and Storm proposed social design as a framework that purposely mixes political and social skills with incremental and rational methodology for problem solving. Social design' offers a "broader range of relevant meanings and activities" and includes "phenomenological and social considerations that better represent the changing" conditions.[65]

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[64] Jong S. Jun, and William B. Storm, "Social Design In Public Problem Solving," *Public Administration Quarterly* 14, no. 1 (Spring 1990): 19-20, accessed June 14, 2012, http://www.jstor.org/stable/40861463.
[65] Ibid., 24.

Table 2. Responses to and outcomes of issues and situations during the third phase.

ISSUE	SITUATIONS	RESPONSES	OUTCOME
Social exclusion	**November 2012** After reading the Pitt County 10-Year Plan to End Chronic Homelessness, I noticed that the homeless had not been engaged or formerly part of the planning process since 2008. During a meeting, Paulette White confirmed that there has been no coordinated effort since 2008 and agreed that the 10-Year Plan Committee needed to address the issue.	**January 2012** I began researching collaborative methods, such as design charrettes, to engage marginalized groups in a co-design environment with service providers, executive directors, and community leaders to brainstorm, research, build scenarios, and prototype innovative service strategies that adhere to the needs of the people that use homelessness assistance. Additionally, I had subsequent meetings with Paulette White about how to engage the homeless in the planning and evaluation of public services.	**April 2012** White partnered with an East Carolina University faculty member to administer assessment surveys to service providers, community leaders, executive directors, and the homeless about the quality of homelessness assistance. She noted that she was reminded of my persistent inquiry about why the homeless were not being engaged in the planning and assessment of homeless policies.
	February 2012 During a follow up meeting, Dr. Bob Thompson indicated that the homeless didn't have as much expertise about the systematic issues of homelessness as the people that serve as liaison for the homeless. I argued that Thompson was undervaluing the experiential knowledge of the homeless and overvaluing professional knowledge of committee members.	**February 2012** I began researching organized citizen councils purposed to hold government agencies accountable for and demand participation in public policy planning. The intent was to get an idea of how citizens organize to demand democratize governance of public policy and services. **March 2012** I shared my thoughts about a citizen council with Lynne James to get her	**May 2012** I joined the Pitt County Regional Committee for the NC Balance of State to become engaged in democratic governance as a result of a meeting between Mike Weikert and I. Weikert, director of the Master of Arts in Social Design at Maryland Institute College or Art, advised me about ways to engage with the public sector when there are political struggles to employ civic engagement for better governance. He pointed out that I could either work within or against the

		perspective since she works closely with the homeless and public and private agencies.	system. On reflection, I realized that I had done very little to build trust with the public and private agencies, community leaders, and the homeless.
Accessible information	**February 2012** While reading the Pitt County 10-Year Plan to Homelessness, I noticed suggestions for an information resource for the homeless. The 10-Year Plan document had a list of housing resources, but I inquired about any follow up of the idea. White indicated that there has been little development of an information resource aside from a small handout, but recognized that a robust system is sorely needed.	**April 2012** During March and April 2012, I began developing a plan to conduct a design charrette to engage the homeless, service providers, and community members to devise a strategy to create a homelessness information resource. I shared my idea with Thompson and White. In May 2012, I met with Brute Labs to get their advice about creating a homeless information resource since they had successfully created projectOPEN in Santa Monica, California.[66]	**May 2012** I agreed to partner with ANGEL Cops, a grassroots nonprofit organization in Greenville, NC aimed at addressing the immediate and long-term needs of the homeless, on developing a homelessness information resource since they had similar plans to create one. I decided to forego the design charrette based on advice from Gunnar Swanson, my faculty advisor, and Valerie Casey, founder of The Designers Accord. Swanson and Casey encouraged me to focus on brainstorming with the people that would actually use the information resource– the homeless.

[66] Brute Labs create projectOPEN to help citizens locate homelessness services. See http://www.brutelabs.org/projectopen.html.

CONCLUSION

Throughout the thesis investigation, the research question morphed according to the situations at hand. In the beginning, the focus was to improve the GCSHC's service experience, but informal discussions with medical student volunteers uncovered external factors that warranted an examination of homeless social and public policy issues. Lynne James confirmed that there are many policies, strategies, and entities that serve the homeless. Visually mapping the complexity became a focal point to get a broader view of the actors and situations that impact homelessness public services. The visual map unexpectedly helped to uncover additional issues of social exclusion and access to information about homelessness resources. Over time, my thesis investigation turned out to be a "political project aimed not at ameliorating needs, but producing or enabling conditions for making fundamental shifts in systems of power."[67] The design methodology I used where helpful in many aspects, but a deeper knowledge of public policy planning would have provided a specific lens to examine the social problems and assess the outcomes of resolutions. The benchmark of outcomes for graphic designers may generally be physical artifacts, which is how I initially assessed resolutions. Instead, I referred to Herbert Simon definition of design as an act of "changing existing situations into preferred ones." [68] Through Simon's lens, I was able to recognize that there were moments of impactful resolutions. For example, Thompson and White noted that the map I developed could be a tremendous tool to help other actors visualize the complexity. Also, White noted that my constant inquiry about why the homeless were not engaged influenced decisions to administer surveys to service providers, community members, and the homeless about the quality of public services. In reflection, designing for social problems is just as much about creating an environment for change as

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[67] Agid, "How can we design something to transition people from a system that doesn't want to let them go?"
[68] Herbert Simon, *The Sciences of the Artificial*, 3rd ed. (Cambridge, MA: MIT Press, 1996) 111.

designing objects that operate within the environment. I began the project hoping to improve

homelessness public services and found out that services "are complex social systems as their

performance depends on the quality of human interactions" rather than products.[69] Moving forward, I plan

to acquire a formal understanding about public policy planning and problem-solving. Currently, I have

partnered with local organizations addressing homelessness to develop innovate solutions and

resolutions to immediate and long-term needs. Hopefully, my efforts will contribute to realizing the

shortcomings and possibilities of design and public policy problem solving in the public sector.

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[69] Service Design Network Manifesto, http://www.service-design-network.org/content/sdn-manifesto.

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