ABSTRACT

My thesis pursues the development of a tool to empower designers and non-designers to better understand humor's function in design and to encourage the use of humor as a rhetorical device to undertake social problems. Humor research is a field that is largely based on linguistic studies, but because of its multidisciplinary stretch in the past decade has displayed a broad rhetorical influence; however, it has yet to form a substantial relationship with design. Through a literature review of linguistic, rhetorical, and design theories, I identified a set of heuristics that guide how humor should operate in design. I then tested the effectiveness of the heuristics, and with their final revision, applied them to designing for motivational problems associated with public displays of political mobilization. My user research inferred the creation of a mobile instructional tool that guides the collaborative and/or individual production of political communication artifacts (e.g. rally signs), which use humor to confront socially complex issues. The artifacts' implicit intent is to motivate political mobilization and to found and/or empower communities. My project focus entails the creation and testing of the tool on the individual level. Whether the artifacts created produce the desired effect regarding mobilization and community strength is unknown; Future work should lend itself to testing humorous design's effect on political mobilization and ability to empower communities.

***TABLE OF CONTENTS**

INTRODUCTION 4
RELEVANT LITERATURE & 6 RELATED WORK
PROJECT PROCESS 10
PROTOTYPE 18
EVALUATION & DISCUSSION 24
CONCLUSION 26
REFERENCES 27
ADDENDIY 28

INTRODUCTION

Aside from a foray into communication design under the guise of "play," humor has not been well understood in design. Play in communication design refers to "a kind of abandon" in which "playthings are type and image" (Heller xxx). In Design Humor: The Art of Graphic Wit, Steven Heller exemplifies play by showing "clever" logos (e.g. the UPS logo), fonts derived from literal objects (e.g. "Lariat," in which the letterforms are illustrated as if made of rope), and comic-style illustrations. But, he hints at humor's more substantial role in design when he says design humor "is not overshadowed by reason but is nevertheless governed by it" (Heller xxxi). My project seeks to explore this substantiality by further defining the role of humor in design: to go beyond "play" and recognize it as a method of strategic communication.

The first phase of my project involved analyzing humor research across multiple disciplines to develop heuristics for using humor in design. In the next phase, I tested the heuristics by asking target users to apply the heuristics to a design problem with which I provided them. I revised the heuristics according to my findings. Initially I intended to apply them to a communication design problem to exhibit their value in use, but the test results revealed participants struggled with using humor despite the heuristics' guidance. I decided to create an instructional tool that would empower designers and non-designers to create persuasive communication fueled by a humorous approach. The heuristics would be embedded within the tool, providing the flow of instruction.

The heuristics were structured to confront a variety of design problems. But, based on my literature review, I narrowed down some characteristics the design problem *must* have to act as an effective case study.

First, the problem must have a negative emotional component that darkens the user experience. In *Design Humor: The Art of Graphic Wit*, Heller asserts humor taps "into deeper reservoirs of human experience." My project aimed to show designing with humor harnesses the power to transform the user's perception of an unpleasant experience, and also the power to initially *create* a positive user experience.

Another characteristic was that the design problem must live in a context both users and designers would approach in a stereotypically "serious" way. The key functions of humor are surprise and contrast, so when it is used in a context where it is unexpected and seemingly opposite, the design will be most effective.

Finally, the problem must have an ideal solution that includes, at the least, an indirect persuasion to self-empowerment.

These characteristics inspired me to research user attitudes and emotions towards socially complex issues and to probe how humor could apply as an approach strategy. My first opportunity came in the form of The Rally to Restore Sanity, a comedic rally hosted by Jon Stewart, Oct. 30, 2010.

The rally allowed me to immerse myself in the intersection of humor and social issues. I took photographs and video. I interviewed numerous people and observed as a marginal participant. I analyzed news coverage of the event for weeks to come, gauging its impact on attendees and the political spectrum. I was fascinated with people's emotions and reactions to the event, including my own.

I felt I had observed humor in its infancy as a catalyst for social change. I decided my project's objective would be to harness humor's strategic use in inciting positive public displays of mobilization and expression. My interviews at the Rally to Restore Sanity showed people's frustrations with politics usually caused them to refrain from publicly participating in events or in discourse. People were afraid of being stereotyped as extremist through sharing their opinions, and thus were afraid of having to engage in controversial interactions. But, the interviews at the Rally also showed a desire to eliminate these frustrations, something which I wanted my tool, under the supervision of my heuristics, to accomplish.

The final stage of my project involved making and testing this tool. Because events like rallies, watch parties, protests, lectures, and so forth, occur in many different contexts (including the user's home), I created a mobile Web application called "HumorMob." HumorMob would serve to guide and encourage the creation of humorous communication artifacts, such as rally signs and posters. Additionally, the application would establish a virtual "humor network," which would aid in facilitating mobilization, strengthening communities, and empowering individuals and their peers. Ideally, the humorous artifacts created would act as central discussion points in this network, extending positive discourse and enhancing user experience.

*RELEVANT LITERATURE & RELATED WORK

In this section, I will discuss theory, literature, and projects from the disciplines of humor research, linguistics, rhetoric, and design that are relevant to my project. The analysis of information absorbed from these disciplines informed the development of my heuristics, which aid in the production and comprehension of using humor as a design strategy.

HUMOR RESEARCH

Humor research is a multidisciplinary intersection of psychology, sociology, philosophy, history, literature, rhetoric, and most recently, computer science. Though the definition of humor varies from discipline to discipline, I adopt the definition most recently used by humor linguists: "a 'creative aligning of concepts' or 'the advancement of new and often unexpected relation of concepts" (Kudrowitz & Wallace 3). In the following paragraphs I will expand on these definitions by discussing humor measurement and humor typology.

Up until the middle of the 20th century, laughter was considered the only measure of what humor researchers call "humor appreciation" (Attardo 46). Laughter lost its significance as a metric in response to the academic conclusion that different audience members in different contexts will react in different ways (Buijzen & Valkenburg 3). Humor researcher Giovannantonio Forabosco claims that all humor is "potential" and whether humor is successful is reliant on "a completely subjective experience" (53).

Tests for humor appreciation, then, have no consideration of laughter as an informant of humor. The standard humor test allots "funniness" to a set scale (Kudrowitz & Wallace 7) that assumes meaning on an individual and subjective level. Humor

scholar Susan Vogel has worked to master humor testing methods for analysis by considering "when testing humor: 1) participants, 2) roles, 3) processing potentials, 4) social affiliations, 5) engagement in text-mediated integration, and 6) basic interpretation of intentions behind the situation" (Attardo 46). These factors can potentially inform testing humor in design. Testing these elements can reveal subjective patterns within users' personalities, thus providing the designer or researcher with information to develop a humor typology in design.

Humor typologies have been created and refuted since Ancient Greece. Aristotle first classified humor into three categories: puns, unexpected events, and "contrast between the development of the elocution and the facts" (Attardo 18). Scholars have taken many paths from this starting point—But, many of these paths are continually being trumped by others. Yet, there is one categorical entity that has withstood humor research and its history: the pun (Attardo 108).

The most relevant aspect of pun research regarding my project is understanding of the pun's visual function, which makes up the majority of the literature responsible for the assumed playfulness of "humor in design." While a pun is typically described as "defunctionalization of language—that is the use of language for play, not for communication," (Attardo 109) a visual pun is described as "an image with two or more concurrent meanings that when combined yield a single message" (Heller 57). According to Eli Kince, visual puns have "an analytical function" that some verbal puns lack (31). One example would be a computer mouse designed to look like a real mouse (the animal). Acknowledging the pun requires prior knowledge specific to the object as well as a mental task to draw the resolution, whereas verbal puns are generally reliant on abnormal language variation, i.e., the defuntionalization of language.

Because pun analysis in linguistics signifies the first stretch of humor research across realms of visual and verbal, I found the field of linguistics' research was most relevant to my project. Therefore, I primarily referred to linguistic humor theories when creating my heuristics.

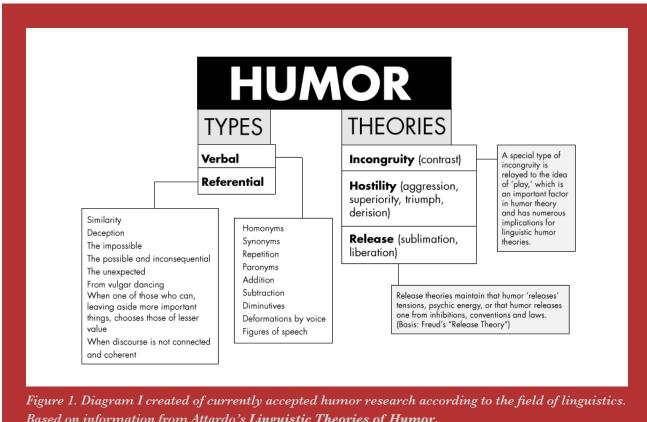
HUMOR MECHANICS

How humans process humor can be classified into three theory groups: (1) incongruity theories, (2) hostility theories (also known as superiority theories), and (3) release theories (see Fig. 1). Humor derives from incongruity when "a stimulus.... diverts from the cognitive model of reference" (Forabosco 45). In other words, incongruity theories note a contrast between two contextual elements. Hostility theory maintains humor arises from "a sense of superiority towards an object (what is

commonly referred to as the 'butt of the joke')." Finally, release theories (made popular by Sigmund Freud) maintain, "...humor 'releases' tension, or humor releases one from inhibitions, conventions and laws" (Attardo 53). Incongruity theories are the most commonly accepted theories, mostly because their recognition is found in the humor's structure and not in the humor's reaction (Kudrowitz & Wallace 2). In the interest of my project, I will elaborate further on incongruity theories. Hostility/superiority theories rely on a sense of superiority, which does not breed positive mobilization. Release theories rely on the user reaction, which would leave designers with no structural basis to design by, only a vague goal to achieve.

INCONGRUITY THEORIES

I also decided to utilize incongruity theories for my research because of their focus on interaction. Incongruity theorist Jerry Suls describes the "humor comprehension model" as a two-step exchange experience (Kudrowitz & Wallace 2). Incongruity



Based on information from Attardo's Linguistic Theories of Humor.

theories incorporate sender and receiver, a two-way communicative process. The two steps include humor delivery (presenting an incongruity) and humor detection (resolving the incongruity). For example, think again about the computer mouse designed to look like a real mouse. The first step of the exchange is when the designer designs the product and the product is manufactured. The second step is when a user notes the humor in the product and purchases it because he or she has detected the incongruity (the joke), has resolved it, and has enjoyed resolving it. Having this product in his or her home or office will also lead others to resolve the same incongruity, establishing a positive familiarity between them. I felt this commonality in resolution had the potential to mobilize users.

Additionally, many incongruity theorists say a resolution must occur on the side of the audience for humor appreciation to reach its maximum potential (Ruch 7). The difference between a humorous experience with just an incongruity and a humorous experience with an incongruity and a resolution is this: a lone incongruity is reliant on one-way communication because the audience's only task is humor appreciation. When an experience contains an incongruity and a resolution, the experience becomes an interactive exchange. The audience is called to solve a problem, and if the problem is solved, pleasure is the reward. In this instance, humor appreciation not only comes from the conceptual quality of the incongruity, but also from the past experience and knowledge needed by the audience member to provide the resolution.

HUMOR & DESIGN

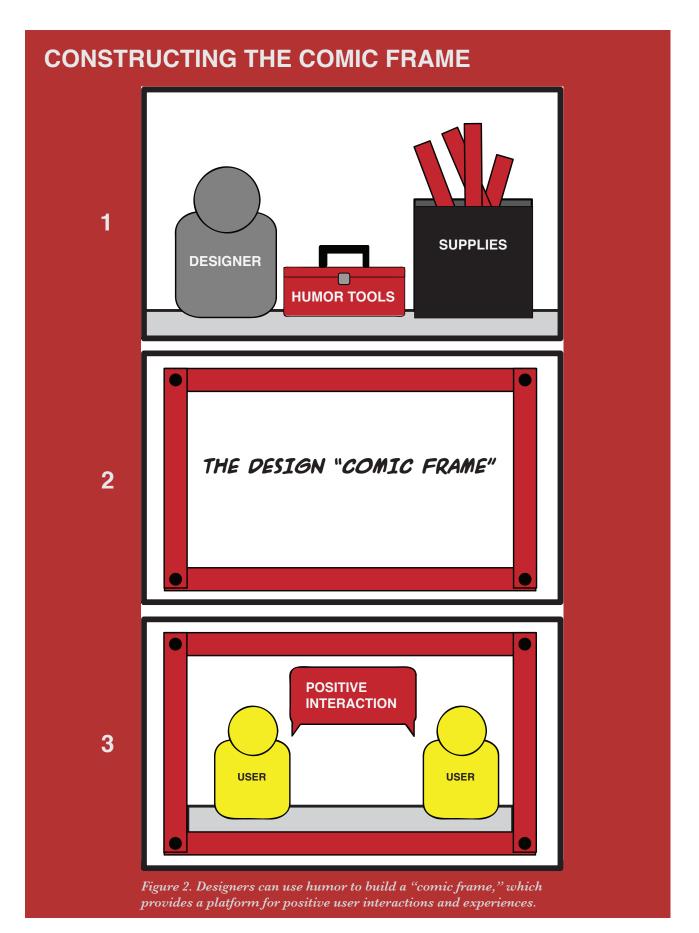
In *Design Humor: The Art of Graphic Wit*, Heller argues the role of humor in design should be "a pill best administered with a witty coating" (28), and a way to establish a positive experience through communication. One case study example of design employing humor to enhance user experience is "Fun Email." Fun Email, an email client prototype that produces humor based on user email content, was constructed with the idea humor could ease

interaction problems between human and machine. A Fun Email quantitative user testing session asked users to compare email experiences between their normal email client and Fun Email over time. Users unanimously responded that Fun Email was more enjoyable, as its comical draw from their personal content created a more meaningful experience. The researchers concluded humor "encouraged creativity" and changed "user perspective" (Mihalcea & Strapparava 37).

The literature discussing humor as an approach to experience design helped inform a realistic expectation of audience engagement levels the heuristics should achieve and what kind of quality results the heuristics should produce.

HUMOR & RHETORIC

As demonstrated by Fun Email, an effective approach for humor use is not necessarily to design a funny concept but to design a frame that influences a pleasurable user experience surrounding a concept. In Kenneth Burke's "Comic Correctives" chapter in Attitudes Toward History, he calls this the "comic frame." His greater opinion of the comic frame references "social management," which is one of the four established "humor uses in communication" by the linguistics community (Attardo 320). Using humor as social management means influencing attitudes and relationships by way of the comic frame. In this setting, users are enabled "to be observers of themselves, while acting. Its ultimate goal would not be passiveness, but maximum consciousness" (Burke 171). This notion founds the claim humor can persuade a user to meet needs such as self-actualization if a comic frame is designed and provided. Figure 2 shows how the user experiences self-empowerment through the comic frame in design.



PROJECT PROCESS

The first phase of my project focused on understanding existing humor research. Knowledge of the design process and now humor research methods inferred my next step: creating heuristics for using humor strategically in design.

CONSTRUCTING HEURISTICS

First, I'll discuss key considerations for the heuristics' creation, which included:

- (1) a cross-examination of research ventures exploring how to use humor,
- (2) a cross-examination of existing and/or proposed humor typologies, and
- (3) a cross-examination of humor appreciation metrics and quantification.

Finally, I will systematically break down the logic behind each heuristic and show the structural relation to the user-centered design process.

It's important to distinguish "how to be funny" and "how to use humor," since the former is impossible and is recognized as so. In my analysis of humor research's take on humor delivery, I found it was usually implied what *not* to do rather than what *to* do, which insinuates the creativity, execution, and success of the comic is still his or her task and responsibility. Humorists are artists; my heuristics cannot raise humorists.

Max Eastman, a writer who studied the comedy of his close friend Charlie Chaplin, developed the first outline of how to use humor when he created the "Nine Commandments of Comic Arts" at the beginning of the 20th century (Heller 36). One more recently accepted foundation from the field of lingustics—"Raskin's Four Maxims of Joke Telling"—has not fallen through, however. The "four maxims" are as follows:

- "(1) Maxim of quantity give exactly as much info as is necessary.
- (2) Maxim of quality say only what is compatible with the world of the joke.
- (3) Maxim of relation say only what is relevant to the joke.
- (4) Maxim of manner tell the joke efficiently."

A rough hybridization of Eastman's and Raskin's guidelines acted as the format and content basis for my own typology.

Since veteran humor researchers had not yet agreed on a humor typology, I had much to consider. I began to explore the limits of design humor by comparing conclusions from my research with copious "funny" design artifacts such as Web sites (see Fig. 3 for an example) and magazine spreads. I then noted and evaluated the assorted ways humor was used in regard to humor theory. This artifact analysis enabled me to get acquainted with how verbal-oriented (linear) typologies could translate (if at all) to generally conceptual and/or visual work. The analysis also confirmed that, despite the typologies originating from a background in linguistics, they did not need to be expanded upon to specially accommodate visual language.

Next, I mapped the typologies humor researchers consider or considered influential. I inspected a vast amount to explore how different elements and details could cohesively form a categorical system. I grouped similar categories from different typologies by main idea, bearing in mind any relevant fine points that kept them distinct. I discovered that while some categories could be considered humor genres, others could be considered humor strategies or approaches. I also discovered that the scope of application in many of



the typologies was not consistent from category to category.

I created a typology of humor strategies (ways to use humor) rather than a typology of humor genres (kinds of humor) for a few reasons. First, I needed the typology to initiate the use of humor in the making part of the design process. Giving the user an overview of humor genres seemed to derail the process from a direction towards making to a direction towards simply understanding. In other words, I'd be giving the user the information but none of the tools. Also, the particulars of what each genre consists of are subjective. If I were to define the genres, I'd be responsible for predicting user content and context and then guiding how they would be used. Given the unlimited amount of contexts available in the world (and that will be available in the world), this explanation is impossible. The strategies work by allowing the user to insert his or her own desired meaning(s) (content and context) into a provided structure that can make the content and context humorous.

Creating a strategy typology rather than a genre typology is also advantageous because strategies have a more obvious correspondence with a specific audience. Each strategy within my typology—with the right content—is broad enough to be applied to any audience. But, the heuristics will ideally lead the user to make the best strategy choice. But, how would the user evaluate what the better choice was if he or she had a high level of uncertainty? How could he or she even prove that using humor as a rhetorical approach worked, or make sure something was indeed "funny" to the audience? I considered the scale humor researchers prescribe, but realized quantifying how funny the design was wouldn't necessarily signal the design's success. Humor is, after all, the approach and not the goal. From an interaction design perspective, the goal is for the designer to address a design problem by designing a comic frame. Success occurs when the audience continues positive dialogue around the comic frame's concept. The continuation of dialogue and discourse is what humor researchers call "communicative dynamism," which means the process

of communication is advanced and not ceased or static (Attardo 289). Measuring this is no easier than measuring laughter, but if the right medium and strategy is chosen for the content the influence of a positive conversation will surface.

HEURISTICS DISSECTED

In this section I will present the heuristics I developed from my analysis of humor research, design, and rhetoric. Then, I will explain how the heuristics parallel the user-centered design process.

1. Determine the desired outcome of your design.

Consider the desired type of reaction expressed by your target audience after experiencing the design. Is it action? Is it reflection? Is it a personal commitment towards behavior change? The answer to this, along with knowledge of your target audience's habits, should make a case for your design's form.

The heuristics begin absent of any mention of humor. This is to ensure that the user understands a humorous design approach cannot and should not be used in every—maybe even in most—designs. It also demonstrates at what point humor should enter a design process and to what extent. The first heuristic is based on the simple principle that design is a method of problem solving with a specified group of people in mind, and that in beginning the process, the problem and objectives should be identified in regard to the specified group of people. This heuristic also conjures the essence of Raskin's "Maxim of Relation," which is to "say only what is relevant to the joke." By establishing the goal, the designer establishes limits, i.e. what is deemed relevant and irrelevant. The designer also establishes an exigence that acts as the basis of the rhetorical situation.

2. Humor is not always appropriate.

If executing humor as a tactic advances and/or positively motivates the process of communication, it is most likely appropriate to use. However, one should acknowledge that humor should be seldom used to maximize its effect. It must not be exploited. If the particular context and/or content of

the design summons tension, is in some way intimidating, contains a complex and/or multilayered message, or is coming into existence at a choice time period, humor is potentially suitable as a rhetorical design device. But the designer must always practice visual integrity, or evaluate the propriety of the individual symbols' meanings and later the meaning of the design as a whole.

The second heuristic introduces humor as an option for an approach, but it bears a warning that's commonly cited across humor research. Perhaps worse than using a humorous approach and getting no reaction is using a humorous approach and getting a negative reaction—Rather than advancing communication, it would cause communication to regress. Many factors contribute to what makes up appropriateness in humor; hence, much of humor research has been dedicated to its study.

The core factor of appropriateness is timing. Timing refers to the point at which humor is initiated, how long its execution lasts, and how long its effect has influence. Eastman's 8th Commandment of Comic Arts is, "Be right with your timing," which occasionally connects to or overrules his 6th commandment, "Be sudden." In a sense, all four of Raskin's maxims allude to good timing, but more specifically the "Maxim of Quantity" and the "Maxim of Manner." The "Maxim of Quantity" states humor should be executed with no extra information, which describes the duration of the interaction. The "Maxim of Manner" states humor should be executed "efficiently," which includes timing as a whole. Another thought to keep in mind relevant to timing is the time spent between initiating humorous interactions, which can exploit humor as an approach and/or "neutralize the effect" if done too often (Attardo 274).

Another factor of appropriateness is context. Context in humor calls attention to cultural values and conventions affecting the situation in which humor is initiated and executed. Timing usually can set an emotional tone on context, specifically if the topic of the humor is a sensitive subject to an audience. Eastman refers to context in his 4th Commandment of Comic Arts, which states, "Remember

the difference between cracking practical jokes and conveying ludicrous impressions." Though this "commandment" appears narrow-minded in ironically recognizing only a few contexts of humor, in principle it still compels the humorist to consider where the content will live. Context also has a direct effect on the rest of Eastman's commandments, which focus on the state of the humorist (who must fit with the context). Regarding Raskin's maxims, context is most easily connected to the "Maxim of Quality" and the "Maxim of Relation." The "Maxim of Quality" asks to only include "what is compatible with the world of the joke," in which one can safely assume the "world of the joke" is the context. Similarly, the "Maxim of Relation" asks only to include "what is relevant to the joke," which one can assume is determined by the context.

Finally, appropriateness is of course determined by content. Content includes the kind of strategy used, the presentation and/or performance of the subject matter, and the symbols used that make up the subject matter. A humorist must consider the connotations of symbols and symbol combinations, as they will summon an audience's past experience(s). A humorist must also present these symbols in a strategically valuable manner. Eastman's reasoning for including "Be interesting," "Be unimpassioned," "Be effortless," "Be plausible," and "Be neat" as commandments boils down to recommending an effective presentation of the content. Yet, all of these can also be voided if "being interesting" or "being unimpassioned" is inappropriate for the context. Rather, the humorist should take cues from the audience to assume the most fitting role. It is Eastman's extreme focus on the humorist in combination with the principles of user-centered design that influenced the next heuristic.

3. It's not about you (being funny).

In order to efficiently implement humor as a rhetorical design tool, the designer must abide by the philosophy of user-centered design. Comedians are the rock stars of humor; designers are the doctors—It's not about you; it's about them. Symptoms of not abiding by this heuristic include (but are not limited to):

- A lack of consideration for symbolic connotations.
- Trying too hard, which signals dishonesty on behalf

- of the designer and jeopardizes the design's credibility
- Having more fun than the audience, i.e. making a joke for you more than for them.
- Spelling it out (providing the resolution) to the audience so that the communication has no opportunity to advance.

While ethos is a main function of humor in the majority of cases, designers must stay modest. Again, the goal is to create a platform for further interaction, thereby advancing communication. If the roles in the interaction have an obvious power imbalance wherein the *designer* is superior, the audience can recognize the lack of opportunity for empowerment. Then the interaction will either fizzle or the designer will be the only party empowered.

When using a humorous approach, a designer's role can overpower the user's role in a few ways. First, the designer can practice inappropriately and disregard the connotations of elements used. Whether the designer means it or not, this action gives the impression the design is communicating the mainstream view. If a user finds that view offensive, the user might become isolated.

Another way a designer can overpower a user is if the designer violates what humor researchers call the "cooperative principle" (Attardo 322). Violating the cooperative principle means violating integrity in such a way that the humorous effect is lost. The humorist is perceived as viewing the audience as inferior instead of as the chief determinant of the humorist's success.

Finally, a designer overpowers a user when the humor is spelled out. If the user is provided with the resolution, he or she has not been presented with a mental task to perform (Attardo 145). Without a mental task, a user has no chance for reflection or information synthesis, only a chance of regurgitating the message communicated by the designer. This isn't necessarily wrong (and perhaps is sometimes the goal), but is not user-centered. Users must own the resolution to validate the humorous interaction. This heuristic is born from incongru-

ity resolution theories that believe humor must be *perceived* to exist—That humorous communication does not begin as so. The heuristic also derives from the concept of the "transition relevance place," in which the humorist must "relinquish the floor and thus.... stop speaking" (Attardo 98). The transition relevance place symbolizes the power a humorist gives an audience by gifting them with the interaction's focus.

4. Consider the target audience's relationship with humor.

Research your target audience's relationship with humor. Think strategically about what past experiences humor will conjure up. A few research methods include:

- Ask audience members how they define humor.
- Probe past experiences to inform referential cues and connotations for language, subject matter, and behaviors. Note any emotions, reactions, and/or expectations.
- Empathize with cultural values on the macro and micro scales. Consider how they perceive themselves and one another. Study the values of their peers.
- Understand their relationship between engagement in a task and empowerment.

Humor works as a communication device because it "touches on shared experiences" (Heller 121) and "both evokes and presupposes familiarity" (Attardo 87). The suggested methods in the heuristics are equally based on the design process and on humor research. For example, an audience's definition of humor can advise how humor should function in a design. Learning about user experiences gives designers a reference point to predict audience perspective. Empathy should be applied by considering cultural and social values, which educates the designer on appropriateness. Understanding these roles and values will also provide designers with constructive information about an audience's peers. This is important because a person is more likely to find funny what their peers find funny (Attardo 324). Finally, designers should strive to understand the level of engagement and/or role the target audience would prefer in a situation. One way to assess this is to determine the level of dedication the audience prefers to give in resolving an incongruity. If a user wishes to solve more complex mental tasks, he or she would most likely prefer a more powerful role in the interaction.

5. Choose humorous elements and/or strategies.

Humor originates from an incongruity, or a contrast. That is, when two varying senses coexist and are perceived as cohesive, a humorous effect is created. Some common strategies include:

- Scale change contrast of size
- Bathtub effect contrast of first and last
- Script humor contrast of content and expected context
- Visual pun—contrast of meanings existing in one symbol
- Second-degree humor—contrast of amount of information provided about context to information provided about content
- Register humor—contrast of language varieties
- Canned humor—contrast of expectations (expecting to be surprised by humor but finding it cliché instead)
- Situational humor—contrast of immediate context and expected behavior

The fifth heuristic introduces a humor strategy typology. As mentioned previously, each category can be applied in any scope. The common thread is humor research's assertion that all humor stems from a contrast. By presenting the established humor contrast options as a framework and jumping-off point, a user with any kind of relationship with humor can begin to experiment with it as an approach.

The typology categories arise out of notable overlaps from humor research's partnership with different disciplines. The visual pun and scale change are the only humor strategies recognized in (communication) design as well as humor research. Surprisingly, the humor strategies most discussed in linguistics—register humor, situational humor, canned humor, bathtub effect, script humor, and second-degree humor—translate to design without any hiccups because of their conceptual consistencies.

6. Success?

According to humor researchers, the success of humor is indistinguishable through theory. In the case of user-centered design and humor, success is best measured by communicative dynamism, i.e. if the humorous approach is responsible for advancing a semiotic dialogue.

Measuring success is important for justifying the functionality of a design and also important for justifying the functionality of humor. Eastman's last Commandment of Comic Arts states, "Give good measure of serious satisfaction." From a design perspective, success should be measured for future refinement of the approach and to gain more knowledge about user experience.

HEURISTICS EVALUATED

I tested the heuristics in two sessions each lasting 30 minutes and each consisting of four designers. All designers were given the same prompt regarding a complex social issue—in both cases it was the topic of cyber-bullying—and a few facts about the issue and the target audience. They were provided with paper, color pencils, markers, pens, glue, scissors, and collage photosets and told to create a design concept in reaction to the prompt. They were also told to use the humor heuristics to develop the design concept. I read the prompt and instructions aloud. The participants read the heuristics individually to themselves—Some then settled confusions with other participants or asked questions about terms and language (see Fig. 4 - 7). On top of taking extensive notes, I video-recorded and photographed both gatherings.

Perhaps the most interesting result was one I had not anticipated: almost all of the participants began the exercise by reading the prompt and then saying, "I'm not funny." Despite being given a framework to walk them through the process, their lack of confidence prevented them from fully jumping into the task (see Fig. 8). Participants even hesitated bouncing ideas off of each other at first out of the same fear. This signaled that if the heuristics were to work, they needed to be presented in a format and language capable of reassuring the goal was not to

design something funny but to design something using the provided strategies.

Other results hinted at a hierarchical and stylistic change in the heuristics' format. At the time of the sessions, the humor strategies were presented as a step in a process. Because I was testing with designers and because the heuristics have the design process ingrained in them, participants were only interested in spending time on the heuristic they weren't familiar with: the humor strategies. And, within the humor strategies, language was an issue. The participants tended to employ strategies with more familiar words and concepts because the complex strategies seemed too far-fetched to grasp in a short amount of time.

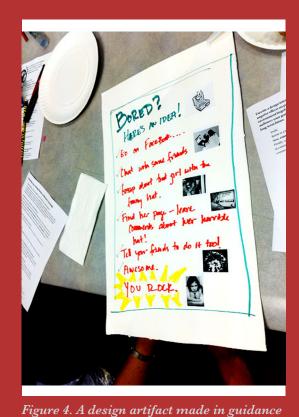


Figure 4. A design artifact made in guidance of the humor heuristics.



Figure 5. Participants hesitate and sketch before attempting to design with the heuristics.



Figure 6. A participant uses the heuristics to create wireframes for a video concept.



Figure 7. Participants began to joke with one another while ideating.



Figure 8. Participants lacking confidence eventually ask for help from other participants on how to move forward with their ideas.

PROTOTYPE

SOCIAL MOBILIZATION ISSUES

For the Rally to Restore Sanity, explicit positivity was enough to enact mobilization. The overwhelming response to my interview questions can be summed up in what a 42-year-old woman from South Carolina—her 17-year-old son by her side—said: "I'm tired of the extremist politics in this country... And, I knew this would be fun." In other words, attendees didn't just come for a comedy show; many articulated a valuable meaning for their presence. This led me to question the emotional context of other similar events. I researched emotions and experiences commonly associated with public displays of political mobilization by doing a terse literature review and conducting a short online survey.

Psychologists and sociologists cite three main reasons for the steady decrease in public political mobilization in the U.S. over the past 40 years: 1) self-censorship (Hayes, Dietram, & Huge 263), 2) individual overload, and 3) quality of contacts (Burn & Konrad 126).

"Self-censorship" refers to people's anxiety and intimidation in expressing their opinion publicly. Scholars say that aside from voting, most forms of political activity are somewhat public because they usually consist of an interaction where an audience is involved. Therefore, people refrain from participating—especially in hostile political climates—because of potential controversy, vulnerability, likelihood to be stereotyped, and/or criticism from the opposing side (Hayes, Dietram, & Huge 264). The results of my online survey confirmed this anxiety, with the majority of respondents saying they'd rather "passively" participate or "moderately observe" than "actively" or "moderately" participate.

"Individual overload" refers to people's anxiety and frustration relating to their personal lives. The term frames the individual as a stimulus giving off a disproportionate number of reactions due to increasing communication demands and population density. Scholars note that, ".... as the amount of time and energy needed for participation increases, the likelihood that an individual will participate decreases" (Burn & Konrad 130). The survey results also confirmed this, with people citing time, money, and access (particularly parking access) as reasons for disinterest in public mobilization events.

Finally, academics have theorized individual disinterest in public mobilization relates to the evolving nature of relationships and communication. In the past, groups of friends would attend such events as a pastime. Now, public demonstrations have become a hotspot for organizations to promote themselves and to attract new members or strengthen ties with existing ones (Burn & Konrad 124). According to the survey, 40 percent of the people who had attended a public mobilization event attended as a member of an organization, but said they would have rather have gone with friends.

Given this information, I decided my tool should strive to harness positive political mobilization. The tool would prevent tension by framing the event with humor, would allow busy but interested users to participate without sacrificing significant amounts of free time, and would aim to strengthen and/or create bonds among communities and/or peers. Because the tension within political mobilization usually comes from fear of public expression, I posited my tool should focus on facilitating this expression.

PROTOTYPE CONCEPTUALIZATION

I wanted my tool to serve two purposes: to implicitly teach how to use humor as a design strategy and to develop a comic frame for public mobilization. Its functionality also needed to consider users with low confidence levels and users with an exceptional amount of "individual overload."

In order to visualize and thus better serve the needs of these users, I developed personas based on the whole of my research. Target users can be summarized as male and female U.S. citizens aged 24-40 whose average extent of political participation is voting. The group's technical expertise ranges from extremely knowledgeable to moderately so. The prototype places a subtley greater focus on females because they tend to have lower confidence levels when using humor and when publicly expressing opinions.

Next, I needed to comprehend these personas acting in everyday situations to gain knowledge about their behaviors. I attended a variety of public and private displays of social mobilization to observe. Events included protests, watch parties, rallies, lectures, and organization meetings that took place anywhere from living rooms to pubs to the streets of downtown Pittsburgh. I intended to discover multiple opportunity spaces I hoped would infer my prototype's form, which I observed should be accessible in a wide variety of contexts. I also observed at the aformentioned events that participants spent part of the time engaged with the event and part of the time engaged with their mobile phones, usually for reasons related to the event. Thus, I decided to build an instructional mobile Web application, which I called "HumorMob."

My heuristics would be implicitly embedded within the application and would guide the user to express themselves publicly by creating a humorous communication artifact (e.g. a sign or a poster) about a complex social issue of his or her choice. Because a user context could be a living room, the tool could also guide the creation of a "virtual sign." I elaborate further in the next section by providing

a scenario of how a user could virtually mobilize using HumorMob from a living room.

A SCENARIO

Imagine a "young professional" female watching television. She knows the U.S. president will soon do a live broadcast of the State of the Union Address. She is concerned about the nature of the nationwide reaction. Normally she wouldn't get involved, but now she has an app she relies on to contribute positive discourse: HumorMob.

She opens the application on her smartphone. The welcome screen displays a personalized and reassuring message and prompts her to enter a social topic of her choice (see Fig. 9). She enters "State of the Union Address" into the textbox and presses "START."

Her topic is displayed at the top of the next screen, which begins the section titled "Strategy." Instructions and a list of humor strategies with their corresponding descriptions are located below the topic (see Fig. 10). She skims the list and reads the descriptions to brainstorm until the broadcast starts. She hears the president discuss the need for "high-speed rail," a method of transportation which she fully supports funding. She decides to use the "Opposing Context" strategy, which is described as "Humor that derives from a contrast of a subject or object and its placement" (see Fig. 11).

The next screen demonstrates an example artifact that uses the strategy (see Fig. 12). Situated below it is a menu breaking down how the example works in three sections: "Audience," "Roles," and "Appropriate." She could skip the menu and press the button below that's labeled "Make a sign using Opposing Context", but she wants to make sure "Opposing Context" works how she thinks it works. She chooses to view the "Audience" section for the example, and then does the same for "Roles" and "Appropriate." Each section displays the same example and a short description of how the topic (audience, roles, appropriate) functions in the exam-

ple (see Fig. 13).

After reading each description, she decides she wants to continue with the strategy and presses the "Make a sign using Opposing Context" button, which takes her to the Opposing Context strategy make screen (see Fig. 14). Her topic is again shown at the top with the strategy description below it. Beneath is the "Steps" menu with the familiar options of "Audience," "Roles," and "Appropriate." She again has the choice of skipping this menu and scrolling down to the canvas. But, since she doesn't know how to use the Opposing Context strategy yet, she decides to go through the steps beginning with "Audience."

The Audience section shows an infographic and description of the ideal audience scope for Opposing Context (see Fig. 15). Below the description is a list of stereotypes with corresponding icons and descriptions. She notes that she has the option to refer back to the example's Audience section if she needs. She chooses the "Slick Important Business Type" stereotype icon from the list (see Fig. 14) to represent her audience and moves on to "Roles."

The Roles section also shows an infographic, this time of the social hierarchy within the situation (see Fig. 16). The description paired with the graphic asks her think about what kind of reaction she'd want out of the "Slick Important Business Type," keeping in mind she should have more power in the interaction when it comes to this strategy (see Fig. 17). Again, she has the ability to refer back to the example's Roles section if she needs a push.

She opens the last section, "Appropriate." This section is only text. It asks her to consider what context people will see her sign in and what connotations the subject matter has (see Fig. 18). She thinks about the connotation of her idea and goes forward to the canvas.

Using her touchscreen, she sketches a high-speed train parked outside of a Southern saloon (see Fig. 19). Once she finishes, she posts the sign in Humor-Mob's Google map over a saloon in town known









for its conservative clientele. She alerts her Mob, i.e. her friends in the network, that she has created a new artifact for them to vote and comment on.

Other members in the HumorMob network can now reference her post either by viewing posts filed under the same topic ("State of the Union Address"), or by checking the postings on Google Maps. Her post inspires other members to become part of the conversation and the fun.

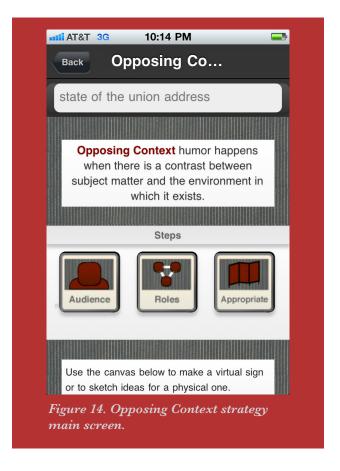
IMPROVEMENTS MADE

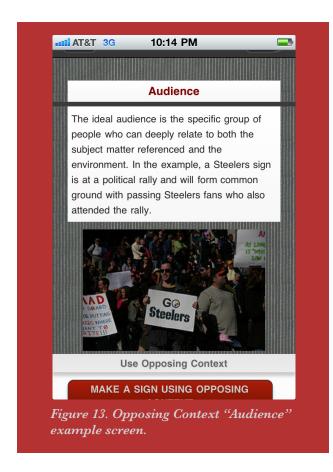
My prototype evolved through numerous iterations. The artifact creation process was not presented linearly with the idea that experienced users might want to skip to the strategy section (in which humor strategies were explained and/or recommended), or experienced users wanting to create a virtual artifact might want to skip to production.

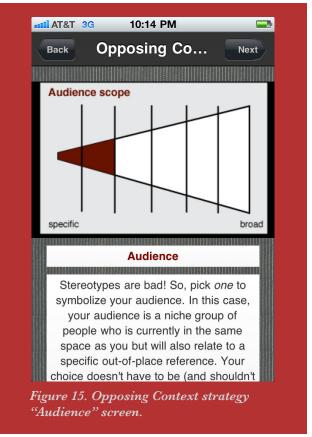
In the subsequent iterations, I continued to address usability issues such as hierarchy, style, language, branding, and information architecture. The main menu needed to present the most fundamental task (making the artifact) with distinction. The initial customary iPhone styling told an inaccurate narrative, especially one regarding humor. The application's purpose needed to be clear from its launch point. Menu items, sections, and styles needed to reflect an unmistakable brand. Screens needed better technical and lingual transitions so as to simulate stages of instruction. Language from screen to screen needed to have a combined ethos of motivational spirit and wit.

Additional features included a section to view popular topics, a space for identifying friends' work and interests, and a space for showcasing and reviewing work with the entire network. The popular topics section was inspired from Twitter behavior in which users mobilize via hashtag, allowing others to see the current impact of an issue and join in at an opportune time. The space to find and identify friends is inspired from design philosophies such as co-design and participatory design as well as the

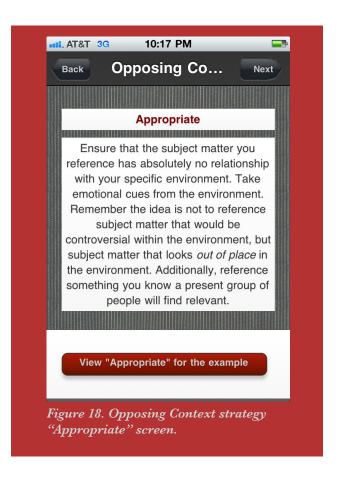
noted desire for friends' presence at mobilization events. The space also acts as a private location where new communities can strengthen ties around artifacts of interest. Finally, the section dedicated to showcasing and reviewing work exists to give users a measure of success. This section is also meant to maintain a genuine and consistent network culture.

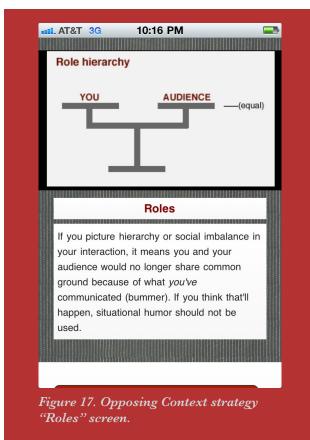


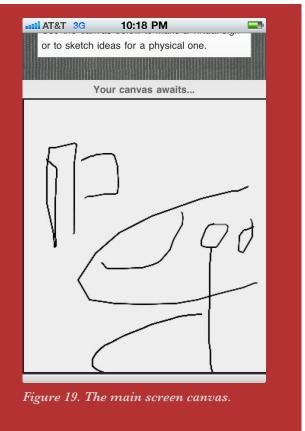












EVALUATION & DISCUSSION

HumorMob was evaluated on two criteria:

(1) whether the heuristics worked (which includes the clarity of their execution) and a humorous communication artifact was created, and (2) whether the experience of political mobilization had progressed for the user.

I'd start evaluating once the user launched HumorMob. While the study participant was using the tool, I stayed in the user's proximity but did not "look over his or her shoulder" in the case that it might make him or her feel more nervous. I furtively timed their presence on each screen and step of the process. I noted any distractions from the

process and ease of navigation. In more detail, I documented the context of the event or location, what role the user seemed to play in it, and who the future artifact's audience was (event attendees or HumorMob network members).

Once the user finished the instructional process and began to make a sign or poster, I observed for hesitations and also the nature of interaction with peers while making (if applicable). When the user finished making, I asked and recorded what strategy he or she had chosen to use. I then asked about their feelings towards the artifact and the process. Finally, I observed the target audience's reaction to the artifact. Virtual artifacts were shared at a di-

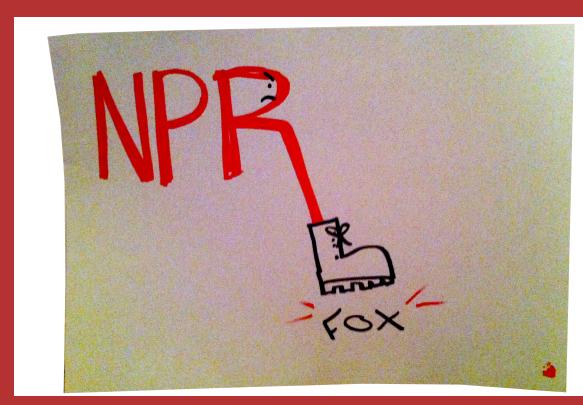


Figure 20. An artifact made by a user testing participant employing the "visual pun" strategy. The participant said she felt the artifact "wasn't funny."

rected culture (target audience) on Twitter to gauge reaction through responses, retweets, and any other type of trackable sharing.

In the last stage of analysis, I checked if the artifact's communication structure demonstrated the use of a humor strategy. Then I checked if that strategy matched the strategy the user had chosen in HumorMob. Next, I examined my documentation to decide what the most efficient and least efficient strategies were given the topic.

I evaluated the functional state of the heuristics based on the following criteria: if the participant asked questions about the interface, how long the participant spent on each screen, if the participant stayed engaged throughout the whole test (amount of distractions), and if the participant showed any signs of unpreparedness (frustration and/or hesitation) to complete the task. Questions often arose about the language used—In many cases the user felt some descriptions were not clear. Taking an excessive amount of time on one section also signified a language clarity issue or the issue of text-heaviness. As far as engagement, the objective was not to enrapture the user with the application, but rather to play off the existing behavior that balances event and mobile phone. If the user paid more attention to one or the other, it usually signified a flaw—That either too much attention was required or that using the application was boring. Hesitation and frustration represented a weak narrative of reassurance, and, occasionally, complete failure in relation to the heuristics' intent. However, those who lacked much confidence often restated their inability to be funny, meaning they found the artifact to be poor quality (see Fig. 20). Yet, when their peers—as in, others at the event or virtual space—saw the artifact, it was always judged as funny. Though, it's possible this was a reaction drawn out of peer respect and dynamics of the virtual/physical modes.

For the second criterion (gauging whether the user's experience had improved), I referred to his or her reactions to the process, emotions felt about the artifact produced, and reactions from the audience. I compared my notes on these aspects with the

documentation of the context in order to consider the experience with HumorMob and an experience without it. Six out of ten participants enthusiastically lauded the app's process by saying, "That was fun" or by complimenting it's objective, often without my probing. This signified a positive experiential aspect occurred because of the application. Aside from the unconfident users mentioned previously, most acted proud of their work and quickly showed it to their peers. The confidence exhibited in this action usually caused the audience to act in an appreciative manner, meaning the tool had become a small axis for mobilization and had done it in a positive way. I wanted this to be the common user experience. I realized that for the less confident users, I had not put enough consideration into how the prototype's narrative language could coddle the user once he or she presented the piece to the audience/his or her peers. Had I considered it, less confident users might have had more optimistic emotions about their products.

CONCLUSION

HumorMob is a mobile instructional tool that teaches humor strategy through the production of social mobilization artifacts such as signs and posters. The humor heuristics I developed are used implicitly in its structure. These heuristics aid designers and non-designers in formulating design concepts that communicate using humor as an approach. Its application to the problem of fatigued social mobilization is a case study—the first case study—to test its effectiveness. The prototype created in reaction to this problem was one tool of many potential tools and artifacts born from the heuristics.

should consider the heuristics a framework to produce a comic frame. But, this framework should be refined as the fields of design and humor research evolve.

NEXT STEPS

HumorMob's conceptualization has many roles in the forthcoming of design and social mobilization. Future work should monitor the depth of self-empowerment that comes from mobilization and humor, and also the progression of communities using the tool over time. Additionally, designers should strive to define accurate methods to test these factors.

Designers should create and test other tools (aside from HumorMob) that use the heuristics to gauge the most effective instructional format. This includes the type of medium but also structural framing of information architecture in digital formats. Regarding the mobile Web format, further testing should be done to see what kind of narrative and language can best reassure less confident users and can also keep all user types engaged. An investigation into instructional design methods should be considered for this task.

Finally, the function of the "comic frame" should be examined in various types of design to better understand its adaptations. Ultimately, designers

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***** APPENDIX

PROTOTYPE SPECIFICATIONS

The HumorMob prototype was built using HTML5, CSS3, and JavaScript, but also incorporated a number of open-source frameworks made especially for the mobile web. I adapted jQTouch, a jQuery plugin for iPhone and iPod Touch development, to achieve the interactions and style desired for my prototype. I also used a jQuery plugin called "Canvas2Image," which converts an HTML5 interactive canvas into a PNG file.

Though HumorMob could be viewed on any mobile device, I designed the aesthetics according to the Safari Web Content Guide in order to adopt iOS design standards. I additionally referred to a number of resources in the Mac Developer Library, including Introduction to Universal Apps, iPhone URL Reference, and the Safari CSS Reference. I was then comfortably able to use Espresso, a software tool specifically created for Mac web development, along with the iOS Simulator to test my iterations.