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DIVERSITY, IDENTIFICATION, AND RHETORIC IN TECH: ON THE ANALYSIS OF SATIRICAL CONFERENCE TALKS

A Thesis
Presented to
The Faculty of the English Department
Western Kentucky University
Bowling Green, Kentucky

In Partial Fullfillment
Of the Requirements for the Degree
Master of Arts

By Bryan A. Knowles May 2018

DIVERSITY, IDENTIFICATION, AND RHETORIC IN TECH: ON THE ANALYSIS OF SATIRICAL CONFERENCE TALKS

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April 19, 2018

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DIVERSITY, IDENTIFICATION, AND RHETORIC IN TECH: ON THE ANALYSIS OF SATIRICAL CONFERENCE TALKS

Bryan A. Knowles May 2018 92 Pages

Directed by: Jane Fife, Jeff Rice, Niko Endres

Department of English

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In this thesis, I examine the rhetorical strategies in Jenn Schiffer's satirical conference talks in which she comments upon her own tech community. In part, I consider her arguments under the theoretical lenses of Burke, Epicurus, and Camus, theories placed alongside the reflective writing of Ullman as a queer woman in that selfsame community. I also discuss the pedagogical opportunities of such an analysis—of tech conference talks in general—to the modern student in our technologically-connected age. Finally, in the long term, I plan to connect the outcomes of this project to a larger project in partial fulfillment of a doctorate degree in Information Science, a project which will investigate the feedback loops between policy, software development, users of information and communications technology (ICT), and humanistic self-expression.

Introduction

The following project is centrally a rhetorical analysis of one speaker's approach to satirical conference talks which uses humor for self-defense, to spark critical conversation, and to prompt group-level self-reflection in the front-end web development community, a community that can be seen to pressure its members to be "rockstars" while simultaneously dismissing dated technology and the opinions of others. This style has developed in the intersections of computer science and art, and the motivation of her works-blog posts, *faux*-tutorials, tweets, hand-drawn pixel-based erotic art, web-tools for visual artists, and conference talks-are intensely personal. In these she, I will argue, adheres to a near-Epicurean grounding in sensory experience, self-expression, self-reflection, and politeness towards those who have done her no harm.

Much will go into supporting this analysis.

In the first chapter, *Kairos*, I introduce the rhetorical situation that Schiffer is operating in and responding to. In particular, I will refer to GamerGate, Alt-Right, and other hate movements online. Therefore, it is the goal of that first chapter to sufficiently–for the sake of analyses later–answer the questions of what it means to be a Software Engineer and what it means to be public in today's internet superculture.

In the second chapter, Theory, we will see that the traditional divisions of *ethos*, *pathos*, and *logos* are non-starters for productively looking at Schiffer's rhetoric and

the wider rhetorical strategies used to deliberate diversity and inclusion in tech. Therefore, I introduce a dialectics between the theorists Epicurus, Burke, and Camus, as well as the necessary input from tech-memoirist Ullman. From this dialectics we emerge with a general theory of communication adapted for a discussion upon the work–and the *symbol* of work–in tech.

In the third chapter, Analysis, we apply our theories to Schiffer and identify three Greek rhetorical strategies and, among those strategies, four Burkean functions. The structure of this chapter is, after a general overview, one section per Greek term, and although I conclude each section with a mapping between that strategy and all five conference talks selected for present analysis, for brevity each talk is discussed at length only once and visited in chronological order.

In the fourth chapter, Pedagogy, I select a course listing of twelve courses across three higer-education schools and three disciplines that might benefit from such a rhetorical analysis. After describing the methods of my pedagogical exercise in designing these lessons, I introduce and theorize three lesson plans: one for a Software Engineering classroom, one for Composition, and one for Rhetoric.

Finally, in the Conclusion/Reflection chapter, we will reminisce what the goals of this project have been over the last two, four, and six years as I find its origins in a then-banal undergraduate curiousity about the nature of sidewalks.

Kairos

Let us ask about the responsibilities of those that create our digital worlds, Software Engineers.

Ellen Ullman writes, "I'd like to think that computers are neutral," and in August 2014 an online hate movement named GamerGate began [12].

Video game developer Zoe Quinn had broken up with her boyfriend, Eron Gjoni, who responded with a WordPress "diatribe" that outlined his evidence that she had "sle[pt] her way around the games industry" and that he had been misled by her charms [24, 25]. Sharing his diatribe on the internet, Gjoni found widespread support, notably from 4chan, a site having once been known to call itself the "internet hate machine." These supporters subsequently hacked Quinn's accounts and doxxed her (leaked her personally information). In "might makes right" fashion the GamerGaters believed themselves on the right side of the argument. This pointed anger soon appeared to expand to include all women in a conspiracy that they were "using sex to manipulate the industry."

Anita Sarkeesian, game journalist and current Executive Director of Feminist Frequency, was publishing at this time a video series documenting the use of female figures in video games as one-dimensional tropes [24, 25]. She was caught in the storm and doxxed as well. Leigh Alexander then published a piece in Gamasutra challenging the "gamer" as a hermeneutic object in the perceived audience of game developers, calling for developers to consider the larger society their

games affect and to take responsibility for the subcultures they create. These views were picked up and mirrored by other journalists writing on game ethics, and the GamerGaters took these posts as evidence of a largescale conspiracy against male gamers by feminists.

On one end of the debate, GamerGate is about male power in gaming and the use of mobs and doxxing to retaliate to those marginalized in that space. On the other, a specious argument is given that this movement is about the disconnect between the gaming community and the journalists who report on it.

This destructive power of organized hate groups online is seemingly ubiquitous and hard to predict.

That same August as Gjoni's diatribe, Anita Sarkeesian canceled a talk at Utah State after receiving a letter that read, "This will be the deadliest school shooting in American history and I'm giving you a chance to stop it" [13]. Brianna Wu, another game developer who had spoken out against the GamerGaters, felt forced to talk with reporters from an hidden location because doxxers had made it unsafe for her to return home, her address having been made public to the mob [29]. "Swatting" is a harassment tactic where the harasser places a bogus police report in order to provoke police response at the target's home in hopes that the event escalates to the point that shots will be fired by SWAT officers at the target, and by January of 2015 the GamerGaters had made swat attempts at video game critic Grace Lynn and web developer Israel Galvez [15]. Felicia Day, actress from *Buffy the Vampire Slayer* and *The Guild*, wrote:

I have tried to retweet a few of the articles I've seen dissecting the issue in support, but personally I am terrified to be doxxed for even typing the words 'gamer gate'. I have had stalkers and restraining orders issued in the past, I have had people show up on my doorstep when my personal information was hard to get. [14]

Felicia Day was doxxed minutes later.

In time, the movement was considered serious enough to prompt industry response. Adobe pulled its ads from the news site Gawker after one ad was found juxtaposed with a Gawker post condoning the GamerGaters' actions; they followed up their decision to remove the ad with a 300 word blog post on antibullying [1]. Conversely, Intel, the hardware company that manufactures many of the graphics cards used by PC gamers, withdrew its ads from Gamasutra, where Leigh Alexander's post on women as tropes in video games had been published [27]. Intel attempted to save face by subsequently pledging 300 million dollars towards diversity in tech initiatives. Alex Lifschitz and Zoe Quinn-whose exboyfriend Gjoni began the movement with his diatribe-founded the Crash Override Network to help victims of harassment online, their first client being swat target Israel Galvez [16]. Wikipedia began banning certain users from editing Gamer-Gate and other gender-related pages to cut back on controversial and false edits, and the founder of Wikipedia, Jimmy Wales, officially entered the conversation by sharing publicly his response to an email from a computer science student [17, 31]. Wales hits upon the speciousness of the GamerGate movement, saying:

You thought you were taking part in a movement that would be about ethics in journalism. A movement that would stand for the rights of all gamers. That would welcome women into the world of gaming and would shame those who would engage in personal attacks on the basis of gender.... But #gamergate [is] a handful of people who are not what you would hope.

The movement that began as a large-scale "flame war," to be clear, has not stopped in these past four years.

By a year after the controversy began, the reknown tech conference SXSW announced and then later pulled a pair of dialectical discussion panels on the subject

of the movement due to threats [18].

Following the Paris attacks in November of 2015, writer and video game critic Veerender Jubbal was targeted by GamerGaters for speaking out against the movement. A doctored photo of his was released that framed him as having connections with the terrorists in the 2015 Paris attacks [28].

March the next year, Microsoft released a chat bot on Twitter that was intended to learn its speech patterns from those that interact with it; within a day, the bot had been taught by a mob of GamerGaters to send directed harassment messages at Zoe Quinn [19].

In the latter half of 2016, alongside the events leading up to Trump's election, openly queer Breitbart writer Milo Yiannopoulos, who had risen as a prominent figure of the Alt-Right movement, was banned from Twitter for his harassment towards Leslie Jones for her role in the Ghostbusters gender-swapped remake [20].

Following the rise of Trump to the Oval Office, the GamerGate, Alt-Right, and other movements of disillusioned and angry males online had become tangled. It has been this shifting and recombining of these social groups, now imbued with political fervor, that has allowed the maelstrom to continue as it has over the last four years.

This merger is corroborated by Andrew Anglin in his *Normies Guide to the Alt-Right*, a history and definition document for the Alt-Right posted on hate blog *The Daily Stormer*, a site which, in a rare move by web companies, has been taken down through Google and Go Daddy's removal of the domain from their services [26]. Anglin summarizes the mission of his Alt-Right community, which he argues was the result of dialectic on sites like 4chan, in saying:

The core concept of the movement, upon which all else is based, is that Whites are undergoing an extermination, via mass immigration into White countries which was enabled by a corrosive liberal ideology of



In the same paragraph that Ullman writes of the neutrality of machines, she says, "We believe we are making it in our own image. We call the microprocessor 'the brain'; we say the machine has 'memory'" [12]. Taken as a whole, *Close to the Machine* is a warning to Ullman's readers, loudest in this sole paragraph, that in 1980s America's rising technophilia "the computer [was] not really like us" and "[was] a projection of a very slim part of ourselves: that portion devoted to logic.... It is as if we took the game of chess and declared it the highest order of human existence." It is this image of the "narrowed self," to phrase it one way, that I have found the most productive lens through which to accurately and honestly write about the relationships between programmers—those that create our video games, social networks, and digital infrastructures—and emotions. The hegemonic division of left- and right-brain, as symbols appealing to the *ethos* of scientisms that respectively stand for *logos* and *pathos*, have, in my experience of our later analyses, their analytical uses outweighed by their artificiality.

So, to stay with an analysis Ullman for a moment, I see in her memoir a struggle with the same questions as Camus in his *The Myth of Sisyphus* [6]. This myth–that Sisyphus eternally climbs the same hill to fall again, and yet he smiles–is refigured by Ullman in her life as a software engineer.

In one scene early in the novel, she writes of when an information system for AIDS patients was dismantled in a single meeting by the vested end users whose criticisms pointed out that the work she and her team had been doing for months was never properly informed of the realities of the system's use cases by practitioners in the field. She has to start over. She has fallen off her hill.

¹This quote is from the original *Daily Stormer* post and was inserted into an early draft of this chapter before the site's removal online; a cursory Google search for the title of the post should turn up an mirrored or revised copy of the full document hosted elsewhere online, though I do not provide direct citation in light of the tentative nature of these mirrors.

And yet she smiles.

She goes back to her team. What she describes is euphoric: "Here thought is telegraphic and exquisitely precise. I feel no need to slow myself down" [12].

No need to slow herself down.

The symbolic function of these words is that her natural state is in contrast to the humdrum day-in and day-out, and soon enough, she forgets the material world and the lives of the AIDS patients for whom this system is intended to help, admitting, "We give ourselves over to the sheer fun of the technical, to the nearly sexual pleasure of the clicking thought-stream" [12].

Compare this to a more recent text, published just last summer, Camille Fournier's guide to managers in tech roles. Here the tangle between the software engineer and the non-logical social world is reiterated:

I am not a buddy-buddy person at work. I feel the need to say this because I think that sometimes we give ourselves a pass at caring about our colleagues because we're introverts [10]

This is written on the second page–before *any other* pieces of advice in an advice book, Fournier is compelled to address "introversion" first, and she attends to it critically and directly: "Being an introvert is no excuse for making no effort to treat other people like real human beings" [10].

Unlike Ullman, who is comfortable writing within the tangle of interpreting for the first time what it means to be a programmer, Fournier is writing twenty years later and in a different genre, that of providing and arguing effective advice. And yet, Fournier's no-nonsense tactics paint a more complete picture than the memoirist's because of the matured discussions they grew out of—the reflections upon the profession that she casts.

By addressing introversion first, Fournier knows her readers are likely to claim their nature as an excuse to put the book down–How could it possibly help them? And by structuring her chapters inline with the "path" of the manager, the first on being managed, the next on mentoring, the next on leading teams, and so on, Fournier is drawing upon the conversation that companies owe their employees clear ladders for their career. And in concluding with a discussion of interpretation and its connections to personal reflection, Fournier is drawing from the rare conversations carried out by those like Anne Balsamo on the hermeneutics that exist between art and "technoculture" [4]. More importantly though, in this conclusion Fournier provides critical reflection as a means to "get away from [one's] ego" [10].

In this wording we see the true criticism that Fournier began on page two and Ullman began twenty years earlier: *The programmer withdraws into that narrowed, logical self heightened by the power of the machine, cutting off one's own empathy in the process and offering explanations like "introversion" in lieu of recognition that it is the ego that lets the programmer smile.* I do not mean to say that programmers are egotistical, but that the "ego" Fournier asks us to "get away from" is at once that same "clicking thought-stream" Ullman writes so sensually about. The "close" in the title of Ullman's *Close to the Machine* is at once a reference to physical proximity and an emotional "closeness." Does the coder's ideal—of operational efficiency—not require empathetic imagination for the machine's labor?



A central concern of web development is user accessibility. Is this not empathetic as well?

The Web Content Accessibility Guidelines (WCAG) outline the set of best practices for creating and maintaining ADA-compliant websites, and these guidelines may provide us a stable starting point for a discussion of what we might herein label a more general "user experience ethics" (UX), an umbrella of concerns of the software engineer's responsibilities to the end-user [32].

The acronym that guides the WCAG is POUR: Perceivable, Operable, Under-

standable, and Robust.

Perceivable refers to digital content that is friendly to those with color blindness and those using screen readers. Web interfaces that rely functionally on icons, images, and charts may be difficult for these users to reap their full benefits, notably when these visual elements lack encoded alternative texts parsable by the screen reader. This area of the WCAG also refers to users with full or partial deafness. Videos without captions are notorious bad examples here.

The second, Operable, refers to providing alternative means of interactions with the human to accommodate motor limitations. For example, browsers may be controlled entirely with the keyboard by tabbing through the various link options on the page. However, the sheer number of links or the order the links are highlighted may hinder such an interaction, putting undue pressure on those unable to use a standard mouse. Further, some websites may contain JavaScript or Flash code that overrides the browser's default keyboard shortcut behavior, in effect disabling controls necessary for a user dependent on the keyboard–including as well blind users who interact with the browser through a screen reading tool. Even users who are able to use a mouse may not be able to use a mouse quickly: The speed mustn't be underestimated at which the user may perceive information, process that information, make a decision on their action, and then act on that decision.

The third, Understandable, leads us to consider how users' actions on a web-site should not be immediately "set in stone," lest the user seek to understand the functions of the site by experimenting with what is available. Sadly though, the formal requirements for this third area do not preclude purposeful confusion in the organization of a site as a whole: What is considered "understandable," by the legal tests of the WCAG, are *individual* elements on the page, elements tested for their language, consistency, predictability, labels, and error prevention. I have per-

sonally assisted a student in understanding another instructor's Blackboard site, unable to advise the student with confidence after an hour's conversation of what exactly his current expectations were. This is against the spirit of the WCAG's third initiative certainly, yet difficult to formalize in legal contexts, like ADA-compliance lawsuits.

And finally, like a wish for an ever-better future, the WCAG asks that website developers plan Robust sites whose technologies operate properly–*i.e.*, still within the rest of the guidelines–on devices both outdated and foreseeably into the future.

What we see in these guidelines is a call to equal benefits as well as equal access.

Problems here may be due to literal access restrictions based on geography or income, such as a digital citizen whose country blocks certain types of content or rural areas suffering from insufficient internet speeds. This may be due to the user's abilities in motor or cognitive skills, or linguistic or cultural barriers, such as poor/missing translations or organization structures/metaphors that do not map well from one information subsociety to another. Consider, for example, how the layout of a website should or should not change between languages whose reading directions differ. Finally, this could be due to educational differences, wherein the functions of the online technology are conflated with those of the operating system or browser itself, thus posing increased complexity towards the user's ability to learn the proper use of the technology.

We instructors at KCTCS are reminded regularly in meetings to be patient with our new students because, coming from a wide range of non-traditional backgrounds, they are learning so much more than our course content alone, especially when third party websites—which are prevalent in KCTCS general education courses—are involved.

As for isolating examples of benefits, these we will find harder difficulty in narrowly imagining, since a "benefit" from a technology may be measured in terms

of financial gain, access to information, connection to opportunities, or social support networks; or inversely, financial loss, exposure to misinformation, exclusion from communities, or lack of safety from harassment like doxxing or brigading (group-based harassment in which the members' actions taken in isolation would not be considered a violation of community standards, but taken together the orchestrated "piling on" amounts to a clear violation to the harassed).

In all, though, these problems lie between the developer and the end-users, and when we consider the interpretations by the developers of the users' needs, we find ourselves in familiar territory for the humanities.

When an online company is successful, by what measure are we to consider this success? money made? "Good" done in the world? other "key performance indicators" like clicks or "conversions?"²

In any of these scenarios, what is excluded is an attention to the class of the users. Are we only benefiting those of a certain income or educational level? only those of a certain race or gender or sexuality? only those of a certain profession? only those of a certain intersectional background? It is certainly within the right and purpose of a website to restrict its audience: *Hacker News*, for example, is a large online community for sharing tech news, holding computer science discussions, and engaging in monthly "Who's Hiring" round-ups. What need would the maintainers of this site have for benefiting non-tech health professionals? I cannot imagine there would be much need at all.

However, an issue arises when we consider the growth of that community within the larger society offline: As the classes that make up the offline tech community shift to include finer intersectionalities, are the online communities that enable that selfsame offline community keeping up? Are they conversely push-

²A "conversion" is a user who, for example, visits the homepage of Amazon and then places an order. This stems from a funnel metaphor in which, of all users who visit that homepage, only a percent move on to the next step, viewing an item. An interface which maximizes conversion, then, should make the most money.

ing out newcomers? Such a pushing out could be the fault of the design of the tools in not meeting the Operability and Understandability of those with a different background to those that developed, maintained, and engaged in that community historically. Just as likely, this could be the fault of communities dynamics themselves. The "Contributor Covenant," for example, is a set of codes of conduct for open source communities aimed at creating safe spaces for programmers online: When a source code contributor files an issue with an open source project, how do the owners of that project oversee the community discussion to ensure that marginalized people unable to bring their whole selves to the project are not pushed out and their ideas and talent thus excluded altogether [8]?

It may seem that I have conflated the human behavior of the online community with the machine behavior that gives those users their buttons. I have.

Just as the nuances of Amazon's homepage contribute to the aggregate human dynamics we label "conversions," the actions made available to users likewise contribute to their behaviors in interacting with one another. So, when users with disabilities are excluded by the way that possible actions have been implemented on the website, they are in turn excluded from the community at large, whose dynamics in turn will go on and develop without the voices of these users. And yet, regardless of how well an online company has made its services universally available, as long as a community of users interacting with other users can form, problems will arise that no "feature implementation" can wholly resolve. So, at what point are developers just shapers of the *tools* and at what point are developers shapers of the *community*?



Something about this is fresh on the tech community's collective memory.

At private spaces like Google, to what extent is the "pushing out" and harassment we have explored above occurring within the tech industry itself? The nar-

rative generally goes that women and people of color have been excluded from prominent positions professionally within tech, and those that do make less than straight white cisgender males. Whereas we have so far been discussing ethics from a UX lens to explore the responsibilities between programmer and user, we find ourselves now under an umbrella of self-referential complexity: in order to discuss the anti-diversity screed of ex-Googler James Damore, which continues the thread we have began of GamerGate and the Alt-Right, we must discuss the responsibilities of programmers to one another and the rhetorics of our discourse. To distinguish this lens from UX ethics, let us call this umbrella "diversity and inclusion ethics" (D&I).

Damore privately published a document titled *Google's Ideological Echo Chamber* in 2017, considered a "screed" against diversity initiatives [7, 23]. This was leaked by Gizmodo that August, which made public that the same tactics we have been tracing–exhaustion, belittling, and placing in unsafe situations–were both present and receiving support within the private spaces of the industry as well.

The document begins by stating his intentions and arguing the need for such a conversation: that perspectives (the political right) other than the dominant ideology (the political left) have been silenced at the tech giant, resulting in an extreme leftism that now unfairly discriminates against men by pursuing its diversity initiatives. His argument then moves to discussing possible biological explanations for the gender gaps in tech: women's bias towards people over things; women's gregariousness vs. men's assertiveness; higher reports by women of stress on the job due to neuroticism; and women's lower drive for status and higher drive for balance. Throughout these points, he reminds us that he is speaking of population-level statistics and not of individuals at the company.

Building off his enumeration of possible causes for the tech gender gap, he describes for each a remedy that Google could implement: increase collaboration;

decrease competition; reduce stressors; provide more part-time opportunities; and promote the idea that men are not constrained to society's expectation of their gender.

However, he undermines these points when he (i) fails to recognize that feminism, which "has made great progress in freeing women from the female gender role," seeks the same for the men and (ii) argues that no initiatives should be undertaken which do not benefit the bottom line of the company. By these failures, he provides opportunities for his Alt-Right supporters to (i) belittle the work of feminists as failed extremists and (ii) dismiss productive conversation as not worth upsetting the status quo that makes the tech giant money. Further, his very next section enumerates the "harmful" diversity initiatives already in place at the company: internal opportunities only for certain races or genders; priority queues; lowering the bar for minority hires; criticisms of teams without enough diversity, while foregoing the same for teams with too much diversity; and organization level goals of meeting certain diversity measures, which he argues incentivizes illegal practices.

He directly blames these initiatives for the racial tensions within the company before proceeding to his conclusion, in which he claims wage gaps are a myth, argues that the left is biased to protect "females" because of evolutionary pressures, complains about being labelled a misogynist for pointing out biases against men, and regards political correctness as detrimental to discourse. His calls to action, then, ask for a demoralization of diversity, inclusivity for conservatives, a removal of programs restricted based on race and gender, for us to disregard empathy to remain rational (Ullman's "narrowed self" is Damore's call to action), consideration of perceived hate speech and harassment from the perspective of the speaker's stated intentions, and weight to biological views of gender differences. In notable addition to these points, he calls for a focus on "psychological safety" instead of

diversity for measuring team composition; this—being a measure of a team's members' sense of openly representing their whole selves in front of the others—, however, is undermined by the entirety of his document.

How could the women and people of color who work with Damore possibly feel safe bringing their full selves to the conversation knowing that he harbored and perpetuated biological essentialism that positioned them as less fit to do their jobs than the screed's author and his supporters? The population-level "statistics" that he hides behind is inapplicable to the tail-level population of Google employees, and the "science" that underpins his essentialism has been carefully and thoroughly debunked by Diane Halpern in her *Sex Differences in Cognitive Abilities* [12]. Yet regardless of works like Halpern's, the Alt-Right has pointed to the language of the screed and Google's subsequent response in firing Damore as proof for their own ideologies that call for an increased "pushing out" of women in tech.

In all of this frustration, it can be hard to remind ourselves of what a "software engineer" is or is supposed to be.

If we turn to our professional codes for guidance, we'll see that these actions of anti-feminist software engineer groups go directly against our codified identities.

The latest draft of a 2018 update to the ACM Code of Ethics states:

Computing professionals should strive to build diverse teams and create safe, inclusive spaces for all people, including those of underrepresented backgrounds. Prejudicial discrimination on the basis of age, color, disability, ethnicity, family status, gender identity, labor union membership, military status, national origin, race, religion or belief, sex, sexual orientation, or any other inappropriate factor is an explicit violation of the Code. Harassment, including sexual harassment, is a form of discrimination that limits fair access to the virtual and physical spaces where such harassment takes place [6]

The Pledge of the Computer Professional asks graduates to speak the words, "I shall engage only in honorable and upstanding endeavors" [5].

The Contributor Covenant begins:

In the interest of fostering an open and welcoming environment, we as contributors and maintainers pledge to making participation in our project and our community a harassment-free experience for everyone, regardless of age, body size, disability, ethnicity, gender identity and expression, level of experience, education, socio-economic status, nationality, personal appearance, race, religion, or sexual identity and orientation [8]

Yet, although a 1997 Code of Ethics written by a joint task force between ACM and IEEE contained the language, "in situations outside of their own areas of competence, call upon the opinions of other professionals who have competence in that area," which would support the appeal of the tech community to the humanities on problems of culture and interpretation, the sentiment is undermined a line above by the language that one should "not unfairly intervene in the career of any colleague; however, concern for the employer, the client or public interest may compel software engineers, in good faith, to question the competence of a colleague" [22]. This latter language can actually rhetorically support actions labeled "good faith" based on veiled biological essentialism. Thankfully though, the current IEEE Codes contain no such language and instead directly call for software engineers "to treat fairly all persons and to not engage in acts of discrimination based on race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression" [21].



This is the nature of the software engineering profession.

We are paid a lot. We cast spells for a living. We call ourselves rockstars and what we create art. And within this nature are questions of ethics that the tech community is struggling to answer.

The dialectics of this community range from the right of medical professionals to own our medical records to the use of the blockchain for storing sexual consent. I cannot hope to ever answer them all; the question of evil on the internet, for example, has been asked since Plato's *Republic*'s tale of the ring of Gyges or sooner. Nor will I attempt to tease out the tangles of the software engineer: Although I agree with Fournier in that the ego she asks us programmers to escape is what enables us to "smile" as we do when we fall, I do not agree that her "ego" is the hermeneutic object of interest that my audience must learn to reinterpret. I believe instead, and develop in the following chapter, that the software community's reinterpretation must occur at the locus of the senses, epistemology, language, and duty, doing so in a manner that retains the "ego" she advises her audience to "get away from" and yet fulfills the purpose of her argument in connecting that selfsame audience to the lived experiences of those they hold power over.

And yet, one may find and point to specific voices doing work within these tangled dialetics, to "name drop" a few: Anil Dash, CEO of Fogcreek Software and writer on "humane tech" and the hermeneutic inability to pin down what the "tech industry" even is; Aubrey Blanche, Global Head of Diversity and Inclusion at software company Atlassian and openly queer latina in tech who leads diversity initiatives by empirically testing the "best practices" of D&I; Paul Ford, whose absurdist humor is aimed at breaking stereotypes about the life of the software engineer; and Katie Shilton of UMD's iSchool, whose research investigates the situational "levers" that prompt software developers to discuss the ethical implications of their work, along with a network of similar researchers on the same grant at iSchools across the US.

To make a more general enumeration, these voices can be found in the work of reports of harassment in tech, experiments to explore new D&I initiatives, trailblazing new forms of online communities, ethics projects within information science academic networks, codes of conduct writers, initiatives supporting minorities entering the field, honestly articulated and stereotype-challenging narratives by software engineers, and artists living at the intersections of technology. One might find from a dialectics of these voices the same umbrellas I have introduced: UX and D&I. Although the differences between the two is substantial enough to support their division, at the heart of both is the same sense of a moral imperative to others by software engineers. The symbolic function here is that we fear ourselves-we fear what will come of our happiness, our friends, and our societies if we ignore growth, as a community, into non-technical fields like ethics and humanities, yet at the same time we suffer an anxiety over the imprecision, non-logic, and absurdity therein. That "very slim part of ourselves" is able to recognize its frailty as an incomplete picture of human experience, but lacks the facilities to reason with that tangle. The chaotic energy one finds in the opening chapters of *Myth* of Sisyphus, long before Camus converges on his "smile," is the same chaotic energy we find driving the types of work enumerated at the start of this paragraph.

To begin untangling what we are, I believe we should first understand how we talk about what we are, as this shapes our collective memory and common goals.

To that end, I have proposed and undertaken a rhetorical study of one voice isolated from the tangle: Jenn Schiffer's conference talks satirizing the very community she works in. Her approach, which I explore at length in a later chapter, is one I believe resists simple interpretation and provides models that she challenges us to mirror and to use to prompt audiences of our own to engage in healthy, collective, epistemic journeys.

Sources

- [1] Adobe Corporate Communications. "When Anti-Bullying Efforts Backfire". *Adobe Blog.* Adobe Systems Incorporated. October 28, 2014.
- [2] Balsamo, Anne. *Designing Culture: The Technological Imagination at Work*. Duke. 2011.
- [3] Burke, Kenneth. *A Rhetoric of Motives*. University of California Press: Los Angeles. 1969.
- [4] Camus, Albert. The Myth of Sysiphus and Other Essays. Vintage. 1991.
- [5] Christensen, Ken and John Estell and Ben Kuperman. *The Oath*. The Pledge of The Computing Professional. n.d.
- [6] The Code 2018 Task Force. "2018 ACM Code of Ethics and Professional Conduct: Draft 3". *ACM Ethics*. Association of Computing Machinery. n.d.
- [7] Conger, Kate. "Exclusive: Here's The Full 10-Page Anti-Diversity Screed Circulating Internally at Google". Gizmodo. Gizmodo Media Group. August 5, 2017.
- [8] Ehmke, Coraline. Contributor Convenant: A Code of Conduct for Open Source Projects. 2014.
- [9] Ford, Paul. "What is Code?". *Bloomberg Business Week*. Bloomberg LP. June 11, 2015.

- [10] Fournier, Camille. The Manager's Path: A Guide for Tech Leaders Navigating Growth and Change O'Reilly. 2017.
- [11] Gotterbarn, Don and Keith Miller and Simon Rogerson. "Software engineering code of ethics". *Communications of the ACM*, 40(11). 110–118. 1997.
- [12] Halpern, Diane. Sex Differences in Cognitive Abilities. Lawrence Erlbaum Associates: New Jersey. 2000.
- [13] Hern, Alex. "Feminist Games Critic Cancels Talk after Terror Threat". *The Guardian US Edition*. Guardian News and Media Limited. October 15, 2014.
- [14] -. "Felicia Day's Public Details Put Online after she Described Gamergate Fears". *The Guardian US Edition*. Guardian News and Media Limited. October 23, 2014.
- [15] –. "Gamergate Hits New Low with Attempts to Send SWAT Teams to Critics". *The Guardian US Edition*. Guardian News and Media Limited. January 13, 2015.
- [16] –. "Gamergate Targets Launch Anti-Harassment Network". The Guardian US Edition. Guardian News and Media Limited. January 19, 2015.
- [17] -. "Wikipedia Votes to Ban Some Editors from Gender-Related Articles". *The Guardian US Edition*. Guardian News and Media Limited. January 23, 2015.
- [18] –. "SXSW Festival Pulls Pro- and Anti-Gamergate Panels after Threats". *The Guardian US Edition*. Guardian News and Media Limited. October 27, 2015.
- [19] -. "Microsoft Scrambles to Limit PR Damage over Abusive AI Bot Tay". *The Guardian US Edition*. Guardian News and Media Limited. March 24, 2016.

- [20] Hunt, Elle. "Milo Yiannopoulos, Rightwing Writer, Permanently Banned from Twitter". The Guardian US Edition. Guardian News and Media Limited. July 20, 2016.
- [21] IEEE. "Code of Ethics". IEEE Policies. n.d.
- [22] IEEE and ACM Joint Task Force. "Software Engineering Code of Ethics". *IEEE Computer Society*. 1999.
- [23] Jones, Owen. "Google's Sexist Memo has Provided the Alt-Right with a New Martyr". *The Guardian US Edition*. Guardian News and Media Limited. August 8, 2017.
- [24] Kelly, Tadhg. "The Gamergate Question". *TechCrunch*. Oath Tech Network. September 7, 2014.
- [25] -. "So Long Gamergate. What Did You Teach Us?". *TechCrunch*. Oath Tech Network. October 19, 2014.
- [26] Mettler, Katie and Avi Selk. "GoDaddy–then Google–Ban Neo-Nazi Site Daily Stormer for Disparaging Charlottesville Victim". *Washington Post*. WP Company LLC. August 14, 2017.
- [27] Parkinson, Hannah. "Intel Pledges 300 Million Dollars for Diversity in the Tech Sector". *The Guardian US Edition*. Guardian News and Media Limited. January 7, 2015.
- [28] Rawlinson, Kevin. "Canadian Pictured as Paris Terrorist in Suspected Gamergate Smear". *The Guardian US Edition*. Guardian News and Media Limited. November 15, 2015.
- [29] Stuart, Keith. "Brianna Wu and the Human Cost of Gamergate". *The Guardian US Edition*. Guardian News and Media Limited. October 17, 2014.

- [30] Ullman, Ellen. *Close to the Machine: Technophilia and Its Discontents*. Picador: New York. 1997.
- [31] Van Winkle, Dan. "Wikipedia's Jimmy Wales Isn't Taking Any of Gamergate's Threats, Tells Them Off Spectacularly". *The Mary Sue*. The Mary Sue, LLC. December 19, 2014.
- [32] W3C World Wide Web Consortium. "Web Content Accessibility Guidelines 2.0". Web Accessibility Initiative. 2017.

Theory

I wrote this chapter first on paper.

Coming from a background that has been a literal dualism between the technical and humanities fields,³ it has understandably been my endeavor, over the two years of this present masters, to join the two. My approach has not been to find a dialetics between them, but to discover a hermeneutics and an ethics that exists within them both while resisting the conventional division.

I believe that I have found this, and I consider this a foundation in a theory of communication.

In writing that initial attempt at this chapter, I strove to mirror the tone and techniques Burke uses to develop his own theories of identification. The draft drew philologically from many sources, each section heading representing not what that section grew to become, but the idea I had in mind as I began. I have since transcribed, revised, and shared that initial attempt with my advisor on this project. What remains is a clearer attempt at describing the mechanisms of that theory of communication, mechanisms that I believe are more honest and productive in describing what is conventionally envisioned as the "rift" between arts and sciences.

This presentation of this theory, then, begins with Epicurus, whose duty to language (deontologically) and preservation of the self (psychologically) will constitute the foundations of this theory with regards to knowledge, limitation, and

³B.S. Computer Science with Professional Writing minor, M.S. Computer Science, M.A. Rhetoric and Composition (present), and Ph.D. Library and Information Science (accepted)

communication.

My primary sources for the views of Epicurus are his letter to Herodotus, preserved in the third century in Diogenes Laertius' *Lives of Eminent Philosophers* and translated in 1926 by Cyril Bailey [3]; and the *Philodemi Rhetorica*, a fragmented work by Philodemus on Epicurean rhetorical theory written in circa 50 B.C., excavated at the Herculaneum in the eighteenth century, and translated and extensively commented upon by Harry Hubbell in his 1920 work by the same name [9]. Epicurus fittingly begins his letter, in the second paragraph as rendered by Bailey, with a call to Herodotus to strive to find the right language to convey his ideas, to strive to understand the ideas attached to words, and to "keep all our investigations in accord with our sensations."

I believe that when Epicurus states we must trust the senses that this is not an absolutist, empirical trusting. Although his natural philosophy is a materilistic one, I believe that his trusting of the senses is better considered "psychological." It is a trusting that has as its determined goal that same notion central to his philosophy, that life is meant to be happy. In this trusting, we strive to do our best with the senses that we have. Herbert Simon might call this a "bounded rationality," except his models of man do not account for the philology of ancient Greek thinkers [10]. If we forego this trust, then, like the skeptics and the nihilists, we doom ourselves to a poor existence.

Of the stick in the water, I feel that it is straight and I see that it is bent. This tells me that my senses are in conflict, but I nonetheless trust that I have proper sight and proper touch. The stick *is* straight and it *appears* bent. This today we can say confidently to be a phenomenon of the refraction of light. To the Greeks, this was a classical test of the senses; to Epicurus, this was more a test of one's natural knowledge.

How do we reconcile the senses with knowledge?

I find my answer in Epicurus's preconceptions, which were for him a solution to the problem of infinite regression. Taken psychoanalytically, however, these preconceptions are the thoughts that we have before we think them, to put it one way, or the encoded potential for communicable thoughts. These are the innates, the biases, the hypotheses, the abductive reasons. Before the reader asks which items of a human's knowledge are innate (the "true" preconceptions present at birth) and which are learned (the "exposed" preconceptions that take root and materialize in possibly subconscious ways), I say that the question itself is moot by the time anyone is asking. By that age, one has been exposed to *so many* sensory experiences and possibly developed uncountable "layers" of preconceptions that teasing apart the innate from the learned provides little productive insight into the subject's actions, beliefs, and statements.

Instead, I find in Epicurus a duty—an owing to ourselves and one another—to "feel out" these preconceptions. In these Epicurean epistemics, so to say, is it possible to make such conventionally dichotomous divisions between the acts "to sense," "to feel," "to believe," and "to know" if there is no material difference between them? Are not they all varying degrees of rigor in that "feeling out" of Epicurean preconceptions? From the perspective of Epicurus's materialism and our focus on communication, I believe that there exists no divisibility between "to sense" and "to know" apart from denotational differences, and I do not hold that exploring those differences will be productive.

Asking, "How do I prove so and so," in these epistemics would therefore be a less accurate reflection on the nature of knowledge than asking, "Why do I already hold the belief that so and so?" 4

⁴The prior question might align with the *Rhetoric* of Aristotle, where rhetorical might makes right, and the latter with the language game of Wittengenstien and the mathematics of Abelson's *Statistics as Principled Argument* [2, 13, 1].

I have no intention here for a philosophy that takes knowledge as a transcendent Truth or regales it as a matter of language; I do, however, take this for knowledge as *communicable*. In this philological knowledge, I posit that preconditions form and, felt out, get challenged and conferred.

In the games of language, language is impossibly imprecise. Yet, to pursue Absolute Deconstruction is again like the skeptics' poor existence. There is no "logic," as we consider it formally, to this statement. It is absurd. And yet for the psychology and cooperation necessary for a happy life, as Epicurus desires, we owe one another more strongly that in the face of language's limitations we will try our best to communicate anyhow.

There is a selfish element to our Epicurean philosophy of communication here.

He strives for a happy life centrally. His ethics are an egoist's–not an egotist's–ethics. Happiness for Epicurus cannot be obtained by excess (like the nearby Hedonists), nor by social isolation. There remains space in Epicurus for professional contracts that grow, unforced and over time, into friendships.

To our Epicurus, a degree of "emotional reasoning"—in a sense other than it typically means today—is permissible. Let us call this *p-logos* to avoid conflation with the connotation today. This *p-logos* is not an epistemic reasoning conventionally. It will not tell us any Truths. Yet, in order to live a happy life, as defined by Epicurus as freedom from pain, it must be that *when something sucks you have the right to call it out*.

Consider one's personal safety.

An Epicurean philosophy may hold that one has the right to promptly remove the source of the "bad" from one's life. And yet, because our duty to make the best of language and because one's beliefs are a "layering" of material experiences unique to the individual—and it is here that empathy meets epistemics—, this right to "remove the bad" is not free of cost. Once safety has been restored, one must,

and I say "must" deontologically, reflect upon the means by which that removal was carried out.

It is here that we may see a call by our Epicurus for a love of education, for how else is one to think critically in retrospect and upon the natural laws? Lack of the development of these skills, Epicurus fears, will lead to an unhappy life. Just as excess is said to lead ultimately to unhappiness, so too would a lack of a right to self-preservation *and also* the conscience following that self-preservation as a regret–a regret of an action taken out of regard for personal safety, but a regret nonetheless.

But we must ask, what *is* this complete, "unnarrowed" human that is not afraid to appeal to reason both logically and empathetically?

So long as Ullman's image of the "Chess game" holds the highest caste in intellectual society—of which both academics and programmers may consider themselves—, then we may never be able to identify this. Camus argues that this sort of human would be absurd. Left to logic alone—nihilistic logic—, why do we not all commit suicide? This topic grim, Camus concludes in *Myth of Sisyphus* with an image of the titular character, upon that brief moment when the boulder falls again, turning back down the slope, his life in remembrance, smiling.

Burke again may help here. That one begins to care about the dentist visited twice yearly for fifteen years, Burke would elucidate the mechanics of the attraction here in a more general sense of rhetoric, a strategy he terms "identification." It is here that our discussion makes a shift to the rhetorical framework of Burke instead of the psychological and epistemic frameworks of Epicurus, yet it is also necessary to hold in mind that the approach Burke takes to rhetoric, at least in *Motives*, is at once psychoanalytical, rhetorical, and hermeneutic, so our shift in approach is more accurately a reframing altogether—an expansion and revision.

So, let us define "identification" more specifically.

We may do this in terms of his Symbol-Dramatism as the recognition of functions of one's own symbols being reflected in the functions of another's symbols.

These terms, "functions" and "symbols"—as I use them and adopt from Burke—, are references to his hermeneutic methods. If we ask of some interesting symbol how it has provided agency to the author to accomplish their purposes, *i.e.* functions, and if we trace these identified functions throughout the author's discourse, then we might imagine these functions piling up or taking shape into some hermeneutic "topology," a term that I find I must introduce to distinguish between the Burkean use of "function" as singular phenomenon and "functions" as collective phenomena.⁵

For example, with enough creativity and effort, a throne can symbolize anything. It is the wealth that holds the king up, literally, above his subjects, at the same time enticing him into a state of lull. It is a device for the author to introduce a dream sequence, or take us into the king's thoughts, the lull of the chair providing the author agency to "pause" the action of one scene as we enter the contentions of those elsewhere. We ask, in such an approach, why we are drawn to certain uses of a symbol, and in this we find that shifting landscape of meaning perhaps concentrated upon certain peaks—thus the image and use of my term topology.

That we might desire to interpret topologies should be evident by the existence of dictionaries: they seek to make "clean cuts" of the topology's otherwise raw "gem" that has begun to take shape through the philologist's sustained attention to Burkean symbols and their functions.

With this framing of Burke in mind, then, his theory of rhetorical identification does not amount to claiming, "You and I are the same in such and such regard."

⁵I remark that a similar term, "psychotopology," is adopted by Therese Steffen in a full-length critical analysis of Rita Dove's works [11]. Steffen's use of the term closely resembles ours here as a hermeneutic "building up" of symbols.

The theory certainly would contain that sentiment, but this would be only a small percentage of the overall theory. Identification is better fit by the phrase, "The way I so and so is like how you so and so," except the placeholding "so and so," as an act, might be grammatically replaced by any of the other axes from Burke's hexad (act, actor, agency, attitude, purpose, and scene). Imagining a "scene" as identification then, it might go, "My situation is a lot like yours."



Identification along a single axis of the hexad at a time is uninteresting, and identification along insignificant functions—of course you and I both own shoelaces, what of it?—is rhetorically ineffective. Show me why shoelaces are important. The bulk of Burke's Rhetoric of Motives is, along these lines, written to address a "significance" of identification, to "feel out" its ways dialectically. Having identified identification as a human tactic of communication, how do we find its use in practice?

In that project, Burke spends much of the middle chapters wrangling with the motives of the second world war and Nazi Germany. How did Hitler identify, for example. The discussion he gives here is depressing and at times cynical (in the modern sense of the word, not the Greek sense). Yet, he emerges from this dialectic with a first principle of identification: *The reason humans need a rhetoric of identification in the first place is directly because we are materially split*. We are, by nature, divided.

From there, Burke provides us a warning.

For scientists to be truly impersonal—and thus resist the rhetoric of identification—would be a short step from seeing animals, nature, and enemy people as "things." He also cautions against vaguely defined memberships, lest these be used to inadvertantly or purposefully discriminate—*I don't know what it is, but you're missing that je ne sais quoi that Steve here's got*.

This vagueness is an interesting by-product of the mechanisms of identification,

and the discussion of one is not complete with the other, so let us hold our attention on the subject.

Burke names this vagueness "metonym," "mystery," and the "mystical." I will use only the lattermost. The mystical is the building up of meanings—diverse functions scattered over a wide topology—under the name of a single, trancendant head term. To proceed building up in this way, Burke argues, is to approach, in the absolute sense, God or the god-man. In Burke's hermeneutics, all mysticisms lead to and stem from the Ideal. That is the true power of mysticism Burke tells us—that "witchcraft" is language rhetorically misplaced from commanding humans to commanding nature. Yet, before he tells us about mysticism—and later at length the inevitabilities of hierarchies, mysticism therein contained, and our social responsibilities therefore to seek the right kinds of returns from our appeal to hierarchy, lest we go the way of the great war—, Burke tells us about Carlyle's clothes.

Clothes are identification made material. In the practice of tech conference talks, we might see that clothes too contain laptop stickers, presentation slides, and technology demonstrations. Subtle clues in these mark, for we software engineers, our uniforms. *Does she work on front-end? Is he a full-stack developer? Are they active in the Ruby community?* Clothes are the material markers of yellow stars in the second world war, of red A's in *The Scarlet Letter*, of the triple parentheses known as "echoes" that one places around a name on Twitter to denote a Jewish user. These markers, albeit material symbols, carry with them the abstract topologies of the functions their bearers have been exposed to and experientially built up over a sustained or intense period. Think of the emotional identification powers of armed forces uniforms alone.

Burke's treatment of rhetoric, alas, goes the way of many in its attitude towards

⁶One Alt-Right harassment tactic is to do this to "bell the cat" and direct the anti-semitic mob. Many high-profile Jewish users have since co-opted the "echoes," placing them directly into their account names.

emotion. Equated—that is, identified—with the fairer sex, emotions get presented by Burke as side effects or targets of rhetoric, not as a source of knowledge in themselves or a goal directly as our Epicurean epistemics—and a feminist epistemics—would allow. Just as Ullman writes of software engineer's narrowing of the human existance to that which is logical, Burke here does similarly with the symbolic. We could find interest in how the logical and the symbolic are obviously related yet not quite equivalent, though I believe a feeling out of their relationship is not at present pertinent.

It will suffice to call out this narrowing of the human experience—that same humanity he calls on scientists to identify with—and to note that in his dialectics he has limited the list of authors read to male authors. Lacking any voices of women, he lacks any perspectives on the sex with which he identifies emotions—placed carelessly on a caste beneath reason—, so his dialectical topology comes to be without any resistance that might declare, "Hey, that's not fair." The literature-as-experiences that he selects results in a building up of his preconditions that represent only one side of humanity.

So let us not permit Burke to cast off emotions so easily.

Let us ask, why does identification even work?

Whatever the case, I believe there is a "rawness" that has the rhetorical power to identify *any* two humans. In contrast, this "rawness" is unlike the more immediate, yet limited, style of identification of Carlyle's clothes.

It is this rawness—and a *trusting* in this rawness—that permits Epicurus to say that any professional relationship, given time, will blossom into a proper friendship. The narrowed self is a challenge to this rawness, and this rawness is a challenge right back to the symbols to which we restrict the image of "friendship." Is friendship more than drinks at a bar? It *must* be. But to attempt an enumeration of the symbols of friendship—and thus a limitation thereof based on our unique ex-

periences with its mysticisms—would be as well to forget how raw, absurd friendship resists reason. This desire-and-yet-inability to enumerate is itself precisely Camus's notions of absurdity.

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It is time to rejoin our discussion with technology, and so it is natural that we address the elephant of the discussion, the duality of man and machine.

Perhaps we could recount Donna Haraway's *Cyborg Manifesto*, in which the posthuman "cyborg" is provided as a metonymic image that challanges—deconstructs— the Western attaction to dichotomous language [8]. In her reinterpretations, the lines between man and machine, in terms of who creates who, are blurred. She concludes with a call towards cyborg hermeneutics which she argues holds the power to bring us out of the dualistic vocabulary that has historically been used to talk about our bodies and our tools. Her appeal is ultimately one of language, as Epicurus likewise introduced his letter to Herodotus, yet not for a "common language," but a means of discourse that is able to operate in a "heteroglossia."

Or we could appeal to Anne Balsamo's introduction to *Designing Culture*, itself a multi-genre work that evades dichotomous definition [4]. Here she introduces the term "technoculture" so as to avoid pitting the two against one another, pointing instead towards "the details and situations when matters of culture were overtly discussed in the negotiations among design participants." And although Balsamo is speaking of man in the scale of social interaction (as opposed to manas-biological-individual), still here we see an attempt to not let language and our existing vocabularies shape us. Our common thread in doing away with that dualistic vocabulary continues to be the above-developed psychological trusting of the senses, accumulation of preconception experiences, a sense of responsibility in our use of language, and a recognition of the power of the mystical symbols in

language that—if not challenged—threaten to run away with our rhetoric, pointing it erroneously towards some false Ideal. Even the term "heteroglossia" is an appeal to the sort of epistemic/narrative "circularity" found in the diasporic works of Baldwin and Morrison, in which the logical appeal to mysticisms is challenged: the topologies that shape our deliberations, or hermeneutic Ideals of such terms as shared "success" and "progress," have no reason to be equivalent from one culture to another or, at the finer grain of the individually-lived ego, one member of a community to another. A "circuitous" epistemic dialog between all voices—the heteroglossia—will always expose sensory experiences incongruent with the hegemonic vocabulary.

And yet, neither Haraway nor Balsamo answers our present question of what an "unnarrowed human" *is*. Their posthumanist threads might state that no such definition could exist. I agree. However, returning to Camus's lead, I find it more productive to consider this unnarrowed rawness illogical, undefinable, *and yet observable* in the human experience.

I believe we can see this in Ullman's closing paragraph (my emphasis):

For now, I'm just going to *enjoy where I am*: at the beginning of a new contract, the rocket-takeoff learning curve, the *exquisite terror* of it, the straight-up ride against gravity into a trajectory not yet calculated.... *If only I could stay here, inside this moment,* before it slips away, as it surely will: *a delusion, a sweet delusion* [12]

It is easy to imagine Ullman's car ride around the curves of California roads as she contemplates her newest assignment as a clear parallel with Camus's Sysiphus turning back down his hill to chase his boulder. But further, I believe we also see here another important symbol for our theory of communication, one we've yet to explore.

In my revisions, I have found it most productive to consider two symbols of my own introduction: what I am calling the "colloquia," a mystical head-term for the intersecting and plural spaces of human inter-communications experienced by the tech community; and "work," specifically the symbol as it is used rhetorically and presented as "clothing" to represent one professionally, neither work-as-production nor work-as-labor, though a feminist understanding of labor might certainly benefit our conversation of "work."

Consider the image of the hobbyist, who although is welcome at the meetings of the professional, is hegemonically identified as outside the "real" conversation.

What is the difference between work and hobby?

Perhaps work in the professional sense is rhetorically equivalent with that of the open source contribution sense. Some engineers are formally employed in the first sense to engage with the community in the second. And yet, "hobby" still stands as a separate symbol as regards one's ability to identify as an engineer. Contributing to open source *as a hobby* is hegemonically figured differently than performing the same labor professionally.

I offer one explanation: commitment. Contributing to open source projects, even when unemployed, carries with it the function of a commitment towards that project. One is identified by these contributions as having had a real hand in the work of that project. Together, these contributors fill the field of computer science with one new identity. Like in an archipelago, they are raising a new land from the ocean floor. This space is simultaneously their own *and also* an initiation into that larger island chain, the collective.

A hobbyist does not have this. Their land is a peninsula. They call themselves "Makers." They are not creating new land, just keeping the longstanding tradition going that began with carpentry, ushering the past into an age of electric motors, literal cars in space, and an Internet of *Things*. And although there are some who

may wear both hats, neither sort of labor consitutes an automatic identification with with other in the rhetoric of tech.

In this way, the work of the software engineer as presented in our colloquia is a creating-of-something-new. It is a solving of a problem no one else has solved before, or doing so within constraints we have never been able to meet.

Of course we know this to be folly.

As we propose new "frameworks"—and every new solution *just must* be delivered as a repeatable unit couched within a framework—, we attach our names to the project of the community. We elicit a sort of control over the future. *Anyone who solves this problem now owes something to me*. To have a framework that every one else uses—this itself is not the identity of the software engineer, but to *desire* it is. Yet I say folly because *there are no true frameworks*. Every solution borrows from a larger, broader history, and in a different context wouldn't even apply to the problem at hand. A solution is a paragraph in a discussion. A word in a wrangle. Other approaches to the framework's target problem certainly exist, and yet to claim a framework is to claim a conclusion, that one may approach this problem always from this same perspective. By declaring that the discipline will now owe oneself, the script has been flipped on what one owes to the discipline.

Still, we need a-if not this particular-symbol of work.

Dialectically, it is this symbol that complements the Epicurean ideal of epistemology—our "colloquia," a sensory space of knowledge-as-communicable—, for without the symbol of work, what is there to prevent the colloquia from becoming a room of starving philosophers? Nothing in our theory above prevents an endless "talking" or "feeling out" of our preconditions. All biases will be challenged forever—albeit important to challenge our biases—without ever endulging in life itself. The colloquia requires moderation, just as all things in Epicurean philosophies, lest we go the way of another poor existence.

The colloquia is, for tech, a fluid movement of communication passing from in-person interactions to one social application to another. Twitter alone has mentions, replies, retweets, quotes, direct messages, and private accounts, each with its own linguistic conventions, so it is easy to imagine an isolated conversation beginning in one medium and being picked up in another, or a single conversation taking place over multiple media at once and kept organized only by the attention spans of the collocutors. The image that emerges here, as we step back to the continuous and circular scale of the whole tech community's discourse, I hope makes apparent my choice of the phrase "intersecting and plural spaces" to define this mysticism above.

Here though, I want to ask as we move into our present conclusion, can the colloquia *itself* be the subject of our work? That is, can we present as clothing a professional treatment of the spaces and manners in which we hold our discussions as a field and thereby identify as a software engineer? Can a theory of communication be seen as the work of a programmer?

I imagine, for some other fields, this may be so. Picture a knitting of NASA scientists, the lines between empirical research and progress-sharing blurred as they pass together in and out of conference rooms and labs. Here we may see the "lab" as an alternative ideal to the "colloquia." I, however, cannot say for certain, as I know little of NASA's operations.

I do say that within computer science, our work and our colloquia are not one and the same, at least not hegemonically. The means by which we communicate is the subject of deliberation so less often than that of other topics, such as privacy, encryption, Bitcoin, and quantum computing. True, we may discuss the *mechanisms* by which we communicate, such as email, IRC, or Slack. But the discussion of the *manner* by which we speak is such a new topic, or at least a topic that is not

typically seen as rich as those other examples—soon we will solve this problem and then we can finally move on. Such thinking pushes the ongoing nature of "manners" discourse from the scenes of our colloquia. "Manners" are just another problem to move on from, not a work to linger with as we would in a "lab" setting.

There are those doing work in this space however.

Haraway and Balsamo have already been mentioned. Ashe Dryden pushed for improved tech conference codes of conduct—or codes in the first place [7]. Katie Shilton leads a lab at the University of Maryland to study the intersections of ethics and design, and Jessica Vitak and Jen Golbeck, at the same university, have done extensive work on the roles of social media as a communication platform within society. And Casey Fiesler, of the University of Colorado-Boulder, both teaches ethics in tech with a focus on ICTs and is vocal about her approaches to this pedagogy and subject matter on Twitter.

And yet, this work on the colloquia itself, and a commitment thereto, does not on its own seem to carry with it the rhetorical power of identification with/as the mystical software engineer within the industry's hegemony.



We can see a "breathing" of our epistemics. This is a breathing that is driven by a sense of identification, knowledge rooted in sensory experiences, a coming together under or against professional codes, and a "drawing back out" in our attraction to a work we can add our names to.

I do not suggest that this breathing of computer science is bad, or that the lab is to be desired for our communal epistemics. I mean only that the intention and *meaning* of our work will be that which is born from our very breath, our methods of speech.

And so here I warn: the power of renegotiation of a technology's placement within our society will lie in the hands of a few. This decision will be made in secret by those

that hold the power of "last interpretation" of that technology's product objectives. These are the coders, hackers, software engineers, and this is a decision, albeit *informed* by the colloquia, that can only be made material as a symbol of our work.

T. H. White writes in closing *The Once and Future King*, "There would be a day—there must be a day—when he," the old and dying King Arthur, "would come back" [14]. White is writing of war and the absurdity of honor. It is absurd because there will always be a King—Carlyle's god-man, whose clothes represent the ideals of our society—, and Camelot is always destined to fall. One cannot put a name to, or a framework around, this King, because this king is transcendant, a thing always in flux. "Honor" is the symbol we use for the right kind of return from Burke's mysticism, and yet it is a mysticism in itself. We are trying to use language to convice the world to put King Arthur in a box. And still language is limited, and still knowledge is communal.

It is all absurd. And yet, that is no excuse not to do our best.

Sources

- [1] Abelson, Robert. Statistics As Principled Argument. Psychology Press. 1995.
- [2] Aristotle. *Poetics and Rhetoric*. Translated by W. Rhys Roberts. Barnes and Nobles Classics: New York. 93–503. 1995.
- [3] Bailey, Cyril. Epicurus: The Extant Remains. Oxford. 18–55. 1926.
- [4] Balsamo, Anne. *Designing Culture: The Technological Imagination at Work*. Duke. 2011.
- [5] Burke, Kenneth. *A Rhetoric of Motives*. University of California Press: Los Angeles. 1969.
- [6] Camus, Albert. The Myth of Sysiphus and Other Essays. Vintage. 1991.
- [7] Dryden, Ashe. Codes of Conduct 101. February 10, 2014.
- [8] Haraway, Donna. "A Cyborg Manifesto". *Simians, Cyborgs, and Women*. Routledge: New York. 149–182. 1991.
- [9] Hubbell, Harry. The Rhetorica of Philodemus. Yale. 1920.
- [10] Simon, Herbert. The Sciences of the Artificial. MIT. 1985.
- [11] Steffen, Therese. Crossing Color: Transcultural Space and Place in Rita Dove's Poetry, Fiction, and Drama. Oxford. 2001.

- [12] Ullman, Ellen. *Close to the Machine: Technophilia and Its Discontents*. Picador: New York. 1997.
- [13] Ludwig Wittgenstein. *Philosophical Investigations*. Translated by Anscombe, Hacker, and Schulte. Wiley-Blackwell. 2010.
- [14] White, T.H. The Once and Future King. Ace: New York. 1987.

Analysis

Kenneth Burke says, "the classical notion of clear persuasive intent is not an accurate fit, for describing ways in which the members of a group promote social cohesion by acting rhetorically upon themselves and one another" [1]. And whereas I have not been persuaded to believe this statement so blanketly to apply the theory to all social examples, I do find in similar terms that the classical notions of *pathos*, *ethos*, and *logos* are not an accurate fit to describe Jenn Schiffer's satirical conference talks. These three classical divisions appear tangled in Schiffer, feeding cyclically into one another, so an attempt to isolate one without the other would prove dishonest and unintersting.

But like Burke, I find his theory of identification, which he presents as a solution to his above-stated problem of describing social motives, productive in this discussion, and in the previous chapter we developed this theory as it applies to the tech community, suffusing it into a larger theory of communication in general alongside Epicurus, Camus, Ullman, Haraway, and Balsamo.

It is my present intention, then, to hold our theory in mind as a literary lens as we trace the major movements of Schiffer's talks, drawing out of our analysis her principal strategies and their functions:

Identification—Schiffer's rhetorical topics are centrally focused on the *people* in tech, not the technology itself. Even in talks about algorithms, we see her actually satirizing the tech vocabulary that drives the symbols of our work, such as how

we just must wrap things up as algorithms, packages, and frameworks in order to make other people use them, thereby becoming a "real" developer.

Emotional Reasoning—As we explored in the previous chapter, there exists in the Epicurean and feminist epistemics a space for "emotional reasoning," which we have labeled *p-logos* for disambiguation. In this, bad feelings may be used as evidence for bad feelings, and these epistemics therefore permit discussions of harassment, as opposed to toxic rhetorical practices that prohibit the injured from speaking out. We see this in Schiffer as she attempts to remind her audience of the consequences of their culture, thereby making them accountable thereof, while also demonstrating how to allow ourselves to recognize bad feelings, the first step to calling them out and dealing with them respectfully and reflectively.

Journey Through the Absurd—Schiffer's challenge-of-the-status-quo theses require deconstructive techniques, and in her talks she acts as a tour guide showing us through the deconstruction. She does this through a long opening narrative which brings us to an unanswered central question, followed by repeated attempts and failures to solve that question. Even in talks where the solution to the question is left ungiven—perhaps it can't ever be given—, this deconstructive journey may act as a thought-model for the audience to apply to their own lives, taking back home a little reminder of the absurdity in life like a corny amusement park tee shirt.

The Self in the Colloquia—And in all of these functions, Schiffer remembers that she is speaking and that she has an audience, a *kairos* that can potentially be dangerous for herself and others. Her tactics therefore protect herself and her arguments. Herself she protects through self-deprecating humor, wit, and charm; her arguments she protects through an insistence on giving examples that are real, lived experiences, as opposed to a reliance on language that members of the audience might mistake or view as loaded, such as the label "feminism" which she never states openly. She is aware of her *locus* within the colloquia, and she navi-

gates it carefully and with gusto and without abandoning an egoistic sense of self.

My primary sources for Schiffer are a selection of five tech conference talks, spanning from her first to her most popular by YouTube views: [5, 6, 7, 8, 9].

At jQuery⁷ 2013, Schiffer argued for the benefits of bridging art and computer science, concluding, "Whatever. You're an artist. Just let you be you." At jQuery 2014, Schiffer demonstrated on the surface a javascript library she developed during her time at the NBA, though we may more accurately say her demonstration was of proper deliberation of library selection and implementation in general practice. At Thunder Plains 2014, following the then-recent passing of her grandmother, Schiffer invoked the image of the "grandparent" to argue for user-centric design, as opposed to developer-centric design. At IRL Club 2015–for which we only have slides–, Schiffer deconstructed the identity of the web developer; although we cannot make conclusive analysis based on slides alone, we might note that the policy she appears to have been arguing for was a call to reinterpretations of what and who "counts" in our industry.

At XOXO 2016, the talk most watched by an order of magnitude of those discussed here and delivered to a significantly larger audience, Schiffer's argument was understandably more complex. Here she enumerated what she had learned as a tech satirist about how we respond to one another and consume information on the internet: "not everything on the internet is true"; read an entire work before giving feedback; "try to be a nice person"; "don't let the industry or community eat you," referring to permitting oneself to have a life outside of tech and enjoy it; and to discuss, as a community, issues further when they "sound like satire," instead of *only* having a laugh at the realization that these news stories, *e.g.* Peter

⁷jQuery is a popular javascript library. By linking their webpages to the jQuery core code as well as any jQuery plugins, web programmers may write complex pages quicker, at the cost of efficiency due to the size of the jQuery code that will need to be downloaded to the user's browser. At the heart of the jQuery community, then, is a sense of collaboration, programmers working together to create and share highly specialized jQuery plugins to solve various web development tasks.

Thiel wanting to replace his blood with the blood of young people, are not from the Onion. "It's way past the time," she says of these non-satirical events, "when we need to start reflecting on how we're fostering a society built on hate, classism, racism, sexism, transphobia," ultimately calling for not just a reinterpretation of our industry as she did at IRL Club 2015, but more generally a reflection upon the colloquia in whole.

Over the following sections, I divide the content of her talks into opening, developing, and closing lines. Although this division is artificial, I believe it sufficiently approximate to the structure of her talks as intended. In each division I note a principal Greek rhetorical strategy⁸ and connect Schiffer's use of that strategy to one or more of the four functions listed above.



At jQuery 2013, Schiffer opens with a title and biography slide. This is unlike her subsequent talks where the title and bio slides are delayed. In this way her first talk is adhering to the typical formula of an academic presentation, and although it is humorous, it is non-satirical. This approach may fail to hold the attention of the audience and leaves the subject matter–code and art–to stand on its own. However, she utilizes her biography slides directly as the first point of her argument, which in effect marries her argument to her identity as a member of the tech community. She does this by subsequently challenging her resume of coding projects with a list of aspects that make keeping up with tech overwhelming; this is challenged in turn by a list of hobbies that allow her to get by nonetheless, a list which includes making art. Therefore, she is joining the under-reported emotional labor of the tech industry with a set of activities positioned outside of tech, which for many of her audience members–men–may cause issues of identification: they have given little thought to or had little experience with tech *as* a source of over-

⁸Namely *paradiegesis, dialysis,* and *accumulatio,* terms adapted from the online *Silva Rhetoricae* dictionary of Greek and Latin rhetorical terms [2].

whelm, and they may identify art through the conventional division as a contrast to tech, a division that our theory in the previous chapter set out to discredit. She addresses this possible misidentification in her subsequent slides, with a quote by Donald Knuth⁹ that it must be an art to deal with things that we do not understand enough to program a computer to do [4]. To make this identification material, she draws from her pocket a printed copy of Knuth's article. Having attempted, then, to bridge the image of the computer scientist with emotional labor, acceptance of limitations in our understandings, and art at large, she distils Knuth's quote into three ways that an art-centric mindset has been useful in her work, finally ending on an outline of her arguments to come, labeled "How do you get started?" The choice of this label invites the audience in, recognizing that art and the humanities stand rhetorically—and perhaps *only* rhetorically—apart from the technical fields. She positions art horizontally with computer science, offering the former as a complement to unnarrow the latter, and sets up an argument that promises to court between the mysticisms of the two.

By jQuery 2014, Schiffer's approach has developed many of the tactics that we might identify as her "signature" in later talks. Like jQuery 2013, and like most of her talks, the technology that powers her slides is "SimpleSlides," boilerplate code Schiffer wrote and hosts on GitHub for quickly writing presentation slides as web pages. This deserves some attention, because working with SimpleSlides as a composition genre in itself differs greatly from how one might use PowerPoint or similar tools. More importantly, the motions of navigating the slides on the stage is less frequently the "clicking through" we are familiar with. Because her presentation is in reality a webpage, she may use keyboard shortcuts familiar to her technical audience, such as scrolling up and down and zooming in and out to find

⁹One might call Donald Knuth the uncle of Computer Science. His voluminous writing on algorithm theory is of the highest regard in the field, second only to the "father" of the field, Alan Turing.

the best fit for the content on the screen *as part of* the presentation, changing windows using ALT+TAB or browser tabs using CTRL+TAB to show prepared code examples, and viewing the source code for those examples directly in the browser using Google Chrome's built-in developer tools. Further, the arrangement and style of the content is a recognizable-to-the-audience result of HTML and CSS's declarative logic, ¹⁰ where the programmer-as-presenter declares the semantic content and order of the slides and the browser is trusted to algorithmically decide the details of font, alignment, and so on. This medium also promotes slide design tactics like copying and pasting the code for one slide and making small edits; this commonly results in her "adding in" one line item or "striking out" line items from the previous slide. Again, these tell-tale signs of her slides-as-webpage will be apparent to her web programming audience, while gone unnoticed by others. Therefore, we should note that her medium is itself a tactic of identification with the audience, possibly placing them back in their own experiences "close to the machine" in web development.

We also see Schiffer delaying her title and bio slides at jQuery 2014, opting instead to directly introduce the problem at hand and attempt a preliminary wrangle, while also setting the tone for a satirical talk. She begins by falsely quoting the creator of jQuery, saying that "tables are the hardest problem in computer science," in this way simultaneously connecting her talk to those in the jQuery community to whom she and her audience are endebted, stating the central topic (tables) of her presentation, and commenting upon the rhetoric of the tech community that one single problem can represent the Ideal of our symbolic work. Over the subsequent several slides—and through a few minutes of technical difficulties with the

¹⁰Hyper-Text Markup Language (HTML) and Cascading Style Sheets (CSS) are the programming languages used to encode the layout and look-and-feel of a webpage, respectively. Javascript, in contrast, is not a declarative language like HTML and CSS, but imperative, and thereby allows web developers to encode particular algorithmic instructions for the browser to follow when, for example, the user clicks a particular button.

projector—, she connects to the shared experience of the audience members of enumerating and isolating problems in a technology, pointing here to issues of HTML tables from the perspectives of the programmer and the user.

This opening narrative ends with a title slide reading, "There are hot local jQuery tables in your area," which satirically connects the subject of jQuery table plugins to a pervasive genre of advertisement on the web, in turn pointing towards the rhetorical moment of making a choice between several options that all "look good." Immediately following the title, she "name drops" her employer and open source projects; a common Schiffer strategy in subsequent talks as well, she introduces her employer not as a symbol of the work that she does or as a place which she represents, but as an emotional call to her work-as-opportunity. For example, at XOXO 2016 she places her employment within context, saying:

I'm not just mentioning that because my CEO is here, but I once took down our entire company infrastructure with one command and so I am forever endebted to them for keeping me around. One great thing about the company is that they not only tolerate my voice but they celebrate it and they allow me do something as my hobby which is very strange, which is trolling our entire industry and the people we're trying to get to give us money.

This contextualization of her employer within her experiences working there, in effect, challenges the hegemonic symbols of work-as-clothing and work-as-product and frames it instead in a way that reminds us that this is an experience that not every person has equal access to. To see this, we might ask why she feels the necessity to make this particular context apparent, a question which suggests that the inverse is true of the status-quo: that mistakes are not tolerated and that ourselves-outside-work are not celebrated by our peers-inside-work. By careful deconstruction here, she is prompting the audience not to identify with her as a

member of their community, but as a direct, unnarrowed person whose area of work is similar to theirs. She does away with the work-as-clothing symbol and argues instead for parallel identifications along herself and the audience as unnarrowed persons, along her work-as-experience and their work-as-product as colloquially¹¹ informed by one another.

Next, at jQuery 2014, she renews the satirical voice by enumerating several oblique examples of tables, including her literal kitchen table and the tabular grid of an 8-bit drawing of a merman, then claiming that the tag is her favorite HTML tag, and finally sharing images of a handwritten note addressed to HTML tables telling them to "get it together though," because she considers the talk that she is about to develop to be, in part, a love letter to tables. Her absurdist humor here, as we have explored regarding Camus, reminds the audience of their own lived experiences as programmers. That the tag is her favorite HTML tag is humorous to believe, but nonetheless "honest" in reflecting that we programmers grow attached to particular aspects of our technologies, like a writer might grow attached to a particular word or phrase, and this framing allows her to identify herself simultaneously as a part of the web development community and someone in a critical position to comment upon it. Further, by framing her talk as a love letter, she prompts the audience to envision her presentation through the lens of another genre, a cognitive tactic which parallels the viewing of another's experiences through empathy.

Across each of Schiffer's talks explored in this chapter, one may witness her style of giving an extended exposition, or *paradiegesis*, which tends towards digression and personal narrative of the events leading up to her role of delivering the presentation itself. Further, we see in her Burkean rhetorical strategies themselves a call for her audience to identify with her and her work by means contrary

¹¹In the sense of our term.

to the conventional symbols already in place in the community—the hegemonic work-as-clothing and work-as-product.

As for preparing the audience for her developing lines, her *paradiegesis* demonstrates how her topic had grown from some banal initial curiosity, then traces the history of that idea. This tracing moves through the topic's uses, definitions, and people involved with it, as well as her own "stressing over" the idea, reconciling this stress by pointing out absurd incongruities between her (stressful) immediate perception of the idea and the (humorous) reality of the situation. In this way, the tone that she sets is a mix of deontologism, pragmatism, and curiosity, all the while using tactics of identification to invite the audience to share in those curiosities, stresses, and reconciliations.

Next, the argument that she develops within her introductory digression is substantial in itself. She brings us to her topic by way of what we might envision a long, reinterpretive journey, and these syllogistic movements are made in a *descriptive* manner, as opposed to a *reasoning* manner. By adhering strongly to evidence in material experiences, she aligns with Epicurus's psychological trusting of the senses, constructs an argument which for the audience to pointedly refute they must incongruently distrust her experiences as a woman and user in tech, and sets up a contrasting backdrop to her later surreal and satirical examples. And in addition to developing the image of her ego-as-individual through this journey, she constructs images of other actors within the *kairos* whose "character" within the digressive narrative continue to play a role in the development, such as her employer, her friends, and prominent members of the tech community.

Finally, as she makes the shift into her developing lines and as we shall see in the following section, Schiffer formally states her topic through a delayed title slide, one whose language is built upon the initial lessons learned in the *paradiege-sis*. This title slide first appears between a quarter and a half through the presen-

tation, and occasionally no formal title slide is given, instead being played by the first use of a repetitive form that will return cyclically in the development sections.

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At Thunder Plains 2014, Schiffer introduces her topic through a recounting of events that led to her opening statement that "open source is a prison," the only words displayed on a slide behind her as she discusses the feeling of being trapped in what she loves while having to balance resolving bugs and dealing with angry people—men—on the internet. She introduces her bio, noting in particular her creation of make8bitart.com,¹² the central subject of this talk. As she closes her *paradiegesis*, she concludes her opening story regarding an anonymous contributor to make8bitart.com whose proposed changes would have reduced the size of downloading the site locally at the cost of requiring users to carry out extra steps to get it to run. To this she summarizes that she would "rather eat dirt than teach [non-technical users] to install node and grunt¹³ just to draw."

After declaring "this sucks" to the dilemma–she is a developer making tools for non-developers, while also being in a community that sometimes forgets that non-developers exist–, she comes to her title slide, "Your Grandparents Probably Didn't Have Node." In this title we see her invoke the personal image of her grandmother, who she recounts having raised her and having passed right before Schiffer entered graduate school. Because of this timing and because her grandmother never had the internet, Schiffer was never able to share the work that she does as a professional with that part of her family. Therefore, Schiffer introduces in this title slide the mystical and, more importantly, empathetic image of the "grandparent" as a stand-in for the non-developer user of technology.

¹²A website for drawing 8-bit pixel art. In addition to working as a software engineer and community manager and writing satire, Schiffer is an 8-bit erotic pixel artist. As an open source project, any user with a GitHub account can propose changes to the site via Pull Requests (PRs). Recent PRs include adding a link to donate to Black Girls Code, downloading of the image, font optimizations, and adding metadata files that allow the site to be run as a local desktop program.

¹³Node.JS and Grunt are server-side javascript tools.

Schiffer is aware here that, in a satirical format, the audience is apt to miss the joke. Combined with the *p-logos* she begins above, whose movements might be less prone to predict one another compared to a conventional *logos* argument, it is paramount that she hold not only the audience's attention but as well their sympathy. In her next movement we see this awareness and that her use of a nontraditional conference tone is at all times purposeful and controlled. Immediately following her title, to cut the tension of the personal grandparent image, Schiffer sets off her development lines with a faux-joke. This post-title slide reads, "There are 10 types of people in this world," an obvious setup for the punchline, "Those who understand binary and those who don't." Instead she cuts herself off midsentence and clicks to a slide reading, "Don't even." Through this appeal to humor, she is asking the audience to abandon or challenge conventional binary divisions of the world into "two types" of people, setting them up for her introduction of a non-mutually-exclusive division between two types of good open source software, that for other developers and that not necessary for other developers (for users). Her site make8bitart.com falls into this latter category, and she co-opts the "making of" genre to guide her developing lines through the story of its creation.

Through this journey, she repeats variations of the form, "your grandparents probably don't care how you built your app." This appeal to the empathetic image of the user helps model the thought process of reminding herself of the goals of her work: to deliver a positive experience to the user, not to feel frustrated choosing the "best" software libraries. She jokingly refers to her work as "garbage," simultaneously removing the stressors of perfectionism and calling upon the absurd and honest emotional attractions that one might feel to their otherwise flawed creations. We might be reminded of her absurdist connections to the tag, except here the emotion conveyed is of sincere endearment.

Having recounted and analytically reflected upon her experiences making

make8bitart.com, she continues the "your grandparents" form. Here she shifts the talk and calls for a general reprioritization of the users, not the contributors, repetitively introducing incongruities and design issues and resolving each with an appeal to one's grandparents. In deconstructing the typical patterns of computer science discourse—the ways that we introduce and go about solving problems—, she injects at each step *p-logos* tactics that challenge the narrowed, brute-logical¹⁴ self with a reminder of the complete human experience. We may note here that the image of one's grandparent is not only one of a non-tech-savvy user, but also one of ancestral knowledge, a position of respect within the family dynamics, and most importantly, a life full-lived. Schiffer's empathetic deconstruction of the software engineer's thought process is just as much a reconstruction of the unnarrowed self within that profession.

As her talk nears its conclusion, her tactics of reasoning begin to align with, and thus reframe within her larger conversation, the profession's discourse surrounding accessibility and user experience. Each movement of *p-logos* in these final slides represents a negative experience of the user to be resolved through creative programming: making it easy for users to download and run one's code, as well as understand how; allowing redundant means of controlling the app to accommodate those with different motor constraints¹⁵; to provide complete and clear documentation for those users that need to "read the manual" to understand what controls are available; and understanding that, in the world of computers, users may be accessing one's app through outdated machines, browsers, and operating systems. This final item is conventionally approached in the tech community through "planned obsolescence," so to contrarily illustrate how it compares to the other *p-logos* enthymemes she recounts a satirical piece of hers. In that piece, she

 $^{^{14}}$ Wilde once wrote of the undesirability of brute-logic as worse than brute-strength. Maybe he was thinking of speciousness.

¹⁵Here Schiffer praises the work of and recommends to the audience two women researching and writing about accessibility, Marcy Sutton and Katie Cunningham.

explains to her dad how to upgrade PHP on a server, thereby giving an indirect argument that upgrading technology is not always straightforward or possible in all users' unique situations. Therefore, the ways in which we move forward ("upgrade") as a community must be viewed through a more inclusive and empathetic lens. Entering her conclusion, then, she argues that we the tech community must lower the barrier to entry for new developers and make the first steps to learning a new technology less intimidating. These frustrations that push would-be-new members from the community, much like Burke's warnings against exclusionary and vague language, are the very thing that "sucks" that Schiffer is choosing to call out with her opportunity to speak to and hold a large audience.

In general across her talks, her developing lines take on a repetitive form in attempting to answer some initial rhetorical question, or wrangle. The branches of this discussion make up what we might label a *dialysis*, a presentation of alternative interpretations of the situation or availability of options. The repeated elements—such as Thunder Plains 2014's grandparent image, jQuery 2013's "Let me be me," and XOXO 2016's references to Peter Thiel—bind this branching argument together, and these usually take the form of a maxim or joke which maintains the tone and identification with the audience. Although these repetitive elements are initially introduced sarcastically, each time we return to them the audience is presented an opportunity to reinterpret them and prepare for their final uses in the conclusion as a way to frame or recall her calls to action, as we will explore in the following section.

Schiffer's developing lines serve somewhere between an enumeration of examples and a syllogism, each example acting dialectically as an attempt and subsequent failure to address some guiding question. Along the way she uses corrections of her own earlier-presented assumptions as a means to challenge unquestioned definitions within the tech community. And, within this syllogis-

tic/repetitive form we may also see her "break up" the repetitiveness closer to the conclusion—much like how the bridge in a rock song serves to hold the listener's attention before a final repetition or revision of the verse—through faux or ironic uses of the genre.

Most importantly, as a sustained deconstructive journey, Schiffer's developing lines act as a thought-model to members of the audience—men—that challenges the rhetorical and epistemic practices of the field. This *dialysis*-based thought-model may remind us of the circuitous heteroglossia of our previous chapter that seeks to challenge the hegemonic use of assumed-global Ideals in discipline- and society-level discourse; further, by making motions of *p-logos* fundamental to the very logic of this syllogism, she is both providing a solution to and calling out the colloquial problems of the narrowed self within the vocabulary of the tech industry. The modeled journey becomes less about declaring what is right—or packaging that solution into a framework to be put on others to follow—, but about practices of discourse that enable the community to listen to what is wrong.



In her IRL Club 2015 slides, Schiffer opens with the question, "Who is a a web developer." Being without a recording of this talk, we cannot comment upon the accompanying narratives or time spent on each movement. However, I believe it still possible to draw out the various principal threads of that argument. Following her bio slides she states the title, "how to be a real web developer," after which we see a list of four items, each an apparent answer to this question. These items, containing solutions like "use twitter" and "have a website," are subsequently struck out and appended with the item "know how to code." This progression suggests IRL Club 2015 also followed her *dialysis* structure of proposing branching solutions and marking their failures, doing so to comment upon the discourse strategies and toxic patterns of her community. She proceeds, over several humor-

ous slides, to deconstruct this answer as well, appearing to argue that the concept of knowing how to code is itself immeasurable, in flux, and not in agreement, especially regarding the prerequisite concepts of what it means to be and how to go about *learning* how to code. Her subsequent branches are "get yelled at on the internet," escape being doxxed, and "yell at people on the internet." To connect these, she repeats the literal image of Michael Bloomberg, shown in a sort of animation juggling a jar of Jif peanut butter. Whereas the significance of the Jif is unclear, Bloomberg is the founder of Bloomberg News, the outlet where Paul Ford published his satirical and interactive 38,000-word essay deconstructing what it means to know how to code [3]; this essay is directly referenced by Schiffer via screenshot and web address, so we are led to believe that the repetitive form of Michael Bloomberg is a means to reintroduce and reinterpret Ford's essay in the context of each deconstructive branch.

Between her first mention of "get yelled at on the internet" and "yell at people on the internet" is a substantial–approximately fifty slides out of the eighty total–narrative reflecting on her visibility in the community and experiences writing satire online. This same narrative, and in many cases the same visuals, make up the bulk of her talk at XOXO 2016, but the framing here–of the vocabulary that makes a "real" developer–is not shared explicitly between the two. We may also note that in her closing slides, alongside the repeated visual of Bloomberg juggling Jif, the list of possible solutions returns. Here the strike outs are removed, leaving the original text in clear view, along with the addition of a new item summarizing her experiences with doxxing. Following this is a final summary, a list of only one item, the aforementioned "yell at people on the internet." Therefore, it appears that Schiffer's conclusion is an attempt to join the various threads of her *dialysis* under the absurdist and mystical image of having a voice and audience within the tech colloquia. This image of yelling at others is a mysticism that we expect

the audience to understand as not pointing in the literal sense to argument for argument's sake, but towards the power and responsibilities in calling out toxic behaviors. Although we cannot know the details of the epistemic journey that she has taken her audience through, it should be clear that these motions nonetheless introduce a guiding wrangle, explore through various branches, and culminate in a resolving and absurdist head-term.

We can view Schiffer's XOXO 2016 talk, then, as a more polished version of the IRL Club 2015 talk, as well as presented for a more general audience. Of those discussed here, this presentation is the only one not to use SimpleSlides. The slides in this case feature large images, bright colors, occasional collages, and cropped screenshots, tending towards striking visuals over declarative syllogism. As suggested by the style of the drop shadows applied to her embedded images, she appears to have used Keynote to create her slides on a Mac computer, and the resulting slides appear to demonstrate the visual-first composition of such tools. Although this design is in sharp contrast to the semantics-first approach of SimpleSlides, the influence of that thought process is evident.

Therefore, Schiffer's XOXO 2016 slides lose the identificative benefits inherent in SimpleSlides. However, because her audience is larger, as well as the venue, I am not certain that a SimpleSlides presentation would net benefit the talk. Not only would the technicals of the slides be lost on many members of the audience—including the audience after-the-fact viewing the talk on YouTube—, the content of the slides may be difficult to read for those seated further back. In addition, she is presenting with a clicker and standing without a podium at XOXO 2016, unlike previous talks where her she is standing in front of her personal Macbook, itself a symbol-as-clothing of identification, and controlling the progression of the slides via keyboard.

However, I also believe the visuals and narratives that Schiffer selects at XOXO

2016 more than sufficiently compensate for these lost opportunities to identify. For example, her opening slide—and a repeating motif—is of a lizard, followed by a second slide of a baby lizard standing on a laptop keyboard. And although these images point towards her identity as a software engineer, her accompanying narrative—of waking up post-bender with the ingredients of a Smores wrapper transferred mirrored to her face—both sets the tone and genre of her talk as satirical while inviting the audience to connect with her as a fellow, flawed human.

This sustained narrative continues, recounting Jeffrey Zeldman's haring of one of Schiffer's satirical pieces to his audience on Twitter. Having apparently fallen for the satire, Zeldman commented, "More misinformation about web standards than you've ever seen in a single place," a sentiment that his audience amplified in a dog-pile effect, resulting in uncharacteristic noise from the social media platform for Schiffer that recounted morning. After illustrating several examples of the toxic behavior present in these responses, she calls for a sense of responsibility in those that have these large audiences and recounts one positive response in particular by Erin Kissanne, whose tweet became the verbatim title of the talk, "No One Expects the Lady Code Troll."

By rhetorically pitting members of the community against one another, such as Zeldman and Zissanne, it becomes paramount that Schiffer can bring identification between her self and her audience front and center, as opposed to relying upon the symbols of identification of software engineering in general. Before proceeding, then, she takes a moment to make her intentions clear. She reflects upon the significance of her opening narrative, stating that it illustrates the nature of those in tech—men—who both have large audiences and are quick to correct others in the community without fully consuming the work they are critiquing. She calls

¹⁶Zeldman is the founder of the popular web design blog *A List Apart* and at the time of writing has a Twitter following of 358,000. For comparison, Tim Berners-Lee, the inventor of the internet, has a following of 287,000 and Michelle Obama has 10,500,000.

this behavior one that makes women more "hesitant to contribute," appealing to a model of empathy that prioritizes listening over "frameworking."

In place of an outline of points to follow as well as to provide her audience familiar expectations in an otherwise individualistic presentation, she co-opts the "origin story" genre to describe her motions in the slides to come. Regardless of the accuracy of this genre-"origin story" can only loosely approximate her actual subsequent tactics—, the belief that they know where they are headed alone may help the audience key into the subjects of her presentation. Further, this creation of expectations elicits opportunities for Schiffer to knock down those expectations for both humorous effect and challenges to the status quo. Using the language of the origin story genre, then, she brings the narrative into the past-as well as couching in this statement the first mention of the repeating element of her dialysis, Peter Thiel's wanting to replace his blood with that of young people—, recounting how she grew up using humor for both entertainment and self-defense. This approach to language and the self aligns with our Epicurean epistemics, as she illustrates here the power of language to mark incongruencies between the senses and vocabulary while also protecting the material self. She argues also along similar lines to Burke, pointing out that phrases like "javascript rockstar" mystically point towards an Ideal and Carlylean god-man. This Ideal, as an accepted symbol within our community, creates overt pressure to perform life-saving work, which in turn can lead programmers to inflate the worth of their work-as-clothing in fear of being left behind. Schiffer subverts this mystical phrase, then, with the name of her original satirical blog, CSS Perverts, which she states began as a means to "stay grounded." This phrase-to stay grounded-also aligns well with our term topological, suggesting that her intentions were to keep the rhetorical courting of the Burkean symbol under control and the Carlylean god-man in realistic perspective.

Her next set of movements at XOXO 2016 regard the blogging platform

Medium, where CSS Perverts first became centralized. For example, in one such thread Schiffer carries out an analysis of apparent credibility offered by the platform. Because Medium was originally invite-only, audiences were prone to mistake that authors were paid for their work; the Obama White House used the platform; and the site effectively balances font, spacing, color, and so on to render even text-only pieces beautifully. Although these aspects gave an air of *ethos* to her quickly written satirical works, they also gave that same *ethos* to what Schiffer calls "the word garbage 5,000 times." This counter-example is an essentialist argument titled "Why Women Shouldn't Code" that, although actually calling for women to be hired more often, it is a call to hire them only into tech positions that are more suited for their "natural" abilities. This rhetoric can be misused to exclude women altogether from the field by excluding them from education and entry-level positions. In calling out this article, Schiffer appears to be aware of the same forces of language noted in Burke's warnings on the misuse of rhetoric and irresponsible use of mysticisms.

Following her threads on Medium, Schiffer provides the audience direct advice for writing satire: "be confident enough so people initially think you're serious, but surreal enough so those who pay attention know you're not." Key to this advice's commentary upon the tech community is the phrase "pay attention," a remark which she then illustrates with multiple screenshots of and narratives concerning comments across social media platforms. These examples show the kinds of messages that she argues are not appropriate types of responses to any content creator online, including at one point her own near-doxxing by GamerGaters. It is here that she breaks tone in an apparent aside that recasts the audience-as-formal to an audience-as-empathetic, saying that although she has tough "lizard" skin to deflect these kinds of messages, too many of her friends have been pushed out. And as a reminder that the members of the audience are members of that very

same community exhibiting these toxic behaviors, she directly calls on them to "stop doing that." It is in this aside and the build-up thereto that all threads of our theory on communication are drawn together—Burkean identification, Epicurean epistemics, Camusian unnarrowed self through absurdity, and a reframing of the work of the tech community to include a responsibility towards the manners of its own colloquia.

As Schiffer moves into her conclusion, she complements the language of her earlier "origin story" genre with the form of a "where is she now," stating that she no longer writes satire as often, thereby satisfying the expectations of the "origin story" and opening her audience for a more general commenting upon the community. Although it only takes a few minutes once she is inspired to write a new piece, it requires disproportionate time to then "monitor the comments" for her own safety. She states here that she is glad to see an increase in men writing satire and critiquing the tech industry's toxic behaviors, but remarks that these men still need to be aware that they are disproportionately less often the targets of doxxers than the female counterparts. "When you're a man," she says, showing another slide of a Peter Thiel headline screenshot, "you can literally do anything." Summarizing the moves she has made up to this point, she calls for the audience to maintain a sense of self in an industry and community whose rhetoric of competitiveness and life-saving-ness might push us to "go all in" unnecessarily. Altogether, these now-joined moves constitute model behaviors which confront the "narrowing" pushed upon us by the tech community's existing mdoes of discourse. And, in one final reference to Peter Thiel's wanting to replace his blood with the blood of young people, she makes a call to action to allow ourselves to listen and to have self-critical conversations, such as about how our rhetorical strategies have enabled the *noblesse* of the tech industry to pursue projects for selfish reasons and projects that will never be able to benefit those of a lower class than themselves.

"We can't all have access to young people's blood," she says, clicking to her final slide, a "thank you" listing her contact information, an emoji of a saxophone, and an emoji of a crocodile, images which we can interpret as her—the lizard—symbolically playing herself out.

In general across her talks, Schiffer's closing lines are not true conclusions. They represent prompts to necessary conversations, not ready-made solutions, and, albeit markedly brief compared to her opening *paradiegesis* and developing *dialysis*, these lines remain substantial in their own right. Through a powerful use of *accumulatio*, they draw together her various syllogistic and deconstructive threads, create a sense of climax, summarize the lessons learned, contribute one final critical reinterpretation to that syllogism, and close on a direct call to accountability.

The work Schiffer does up to this point in her argument acts to structure thought processes that challenge deeply embedded patterns of discourse and narrowed epistemics, while maintaining identification and building trust with her audience. Without this trust, her position might not allow her to comment so directly upon the behaviors of the community as she does in her conclusions. It is in these comments and her use of satire throughout that Schiffer is pointing out the incongruencies in the tech community's vocabularies and behaviors. Her absurdity becomes our mirror, and the result calls upon us to take ourselves less seriously as bearers of our work-as-clothing, to trust our senses and our experiences enough to call out that which "sucks," and to have the unnarrowed empathy to listen to and do the best with our limited language to understand those of typically undervalued perspectives: the women within the community, and the users without.

Sources

- [1] Burke, Kenneth. *A Rhetoric of Motives*. University of California Press: Los Angeles. 1969.
- [2] Burton, Gideon. *Silva Rhetoricae: The Forest of Rhetoric*. Brigham Young University. 2007.
- [3] Ford, Paul. "What is Code?". *Bloomberg Business Week*. Bloomberg LP. June 11, 2015.
- [4] Knuth, Donald. "Computer Programming as an Art". *Communications of the ACM*: 17(12). 667–673. 1974.
- [5] Schiffer, Jenn. *Learn Code, Make Art.* jQuery: Oregon Convention Center, Portland. June 14, 2013
- [6] -. There are Hot Local jQuery Tables in your Area. jQuery: Chicago. September 2014.
- [7] -. Your Grandparents Probably didn't have Node. Thunderplains JS. October 2014.
- [8] -. *How to Be a Real Web Developer*. IRL Club: The Bell House, Brooklyn. June 15, 2015
- [9] -. *No One Expects the Lady Code Troll*. XOXO Festival: Revolution Hall, Portland, Oregon. September 11, 2016.

Pedagogy

In searching the current course catalogs of UK and WKU and reviewing course curricula files of KCTCS [8, 9, 6], I have identified twelve courses which will be of interested in attending to the question, how can a satirization of diversity, inclusion, and rhetoric in tech contribute towards one's overall pedagogic goals?

The official descriptions and objectives of these courses are outlined in the table below. The purpose of this course list is not to be comprehensive, but to equip our present discussion with realistic pedagogical examples to refer to. Therefore, although the WKU course catalog was consulted, only courses from UK and KCTCS were ultimately selected.

The Computer Science Profession (UK/CS100)

Summary: "An introductory seminar which covers the fundamental activities, principles, and ethics of the computer science profession. An overview of the discipline of computer science, examples of careers, the history of computing and experience with elementary computing tools are included."

Objectives: "The students will develop a sense of identity with computer science. They will learn about computer science as a profession and as an academic discipline. They will develop an appreciation for the role of computer science in society. They will be introduced to basic computing terminology."

Software Engineering for Senior Project (UK/CS498)

Summary: "Current approaches–practice and technologies–for developing reliable software: specifications, testing, and verification.

Individual and team assignments focused on applying these approaches to software systems.

A significant communication and composition component related to specifying, designing, presenting, and documenting software systems."

Objectives: "Collaborate with a team"; "Elicit software requirements"; "Translate requirements into an actionable design"; "Research new technologies and APIs"; "Implement software"; "Validate software at all stages of its creation"

Software Engineering (UK/CS616)

Summary: "This course provides an overview of the software engineering discipline: software requirements, software design, software construction, software management, and software quality. Testing and validation techniques will be emphasized throughout the course. Programs and program fragments will be developed and studied throughout the course to illustrate specific problems encountered in the lifecycle development of software systems."

Objectives: "Students will learn software engineering techniques useful for the development of large software/hardware projects. Experience will be gained in working with teams throughout the complete development cycle of a class project."

Requirements Engineering (UK/CS617)

Summary: "The course will examine the requirements phase of the Systems Engineering and Software Engineering lifecycles in detail.

Topics will include: requirements elicitation, requirements specification, and requirements analysis. Verification and validation techniques will be emphasized throughout the course.

Students will work in small groups to research and present a related topic."

Objectives: "The student shall understand and be able to perform multiple requirements elicitation techniques"; "The student shall be able to perform early lifecycle risk analysis based on requirements"; "The student shall be able to critically evaluate requirements engineering research carried out by others"; "The student shall be familiar with ethical considerations in requirements and software engineering"

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Introduction to Interpersonal Communication (KCTCS/COM252)

Summary: "Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts.

Requires participation in written and oral activities designed to develop and improve interpersonal skills. Includes perspective-taking, relationship and conversation management, effective listening, conflict management, communication climate, communication anxiety, and cultural/gender differences in interpersonal communication."

Objectives: "Demonstrate knowledge of the components of the communication process";

"Analyze and explain the development of the self and the role of self in interpersonal communication"; "Exhibit knowledge of the role of ethics in interpersonal relationships"; "Identify and explain elements of perception and the role of perception in interpersonal communication"; "Demonstrate knowledge of interpersonal conflict management strategies"; "Identify cultural influences on communication behavior"

Literature and Genre (KCTCS/ENG231)

Summary: "Explores one or two different literary forms or genres, i.e. the formal categories into which literary works are placed, including the conventions of each genre and related sub-genres. Considers student writing."

Objectives: "Identify and define literary genres or forms and how they relate to the assigned literary texts"; "Use basic terms of literary analysis in discussing literary genres or forms"; "Write critically about assigned literary texts in relation to the contexts of their forms or genres"; "Analyze the literary genres in terms of historical, social, and cultural contexts"; "Critique the varied impacts of literary genres or forms on literature as a whole"

Literature and Identities (KCTCS/ENG233)

Summary: "Explores a number of selected literary texts, with special attention to the construction of personal, ethnic, racial, or national identity and considers how race, class, sexuality, and/or nationality influence representations of experience. Includes attention to student writing."

Objectives: "Identify, summarize, critically analyze, and interpret a variety of literary works with an emphasis on themes of personal, ethnic, racial, social class, sexual, and/or national identity"; "Use literary analysis terms and basic methods of analyzing literature when interpreting, discussing and writing about works"

Introduction to Women's Literature (KCTCS/ENG234)

Summary: "Introduces students to the rich body of women's writing. Explores common and differing themes, attitudes, cultural norms, and gender identity evident in multiethnic, diverse societies through analysis and discussion of texts by women writers."

Objectives: "Identify, summarize, critically analyze, and interpret a variety of written works by major women writers"; "Understand literary analysis terms and use basic methods of analyzing literature when interpreting, discussing and writing about works by women writers"; "Identify and interpret the main elements of literary works, including theme, symbolism, characterization, setting, plot, structure, and point of view"; "Apply various contextual approaches-such as historical, social, political, geographical, biographical, psychological, and feminist to literary analysis-to interpret values, beliefs, attitudes and influences during different eras and compare these to modern day"; "Produce written literary critiques that show evidence of effective writing skills and the ability to compose persuasive arguments that include research and documentation"

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Introduction to Communication (KCTCS/COM101)

Summary: "Introduces the process of communication as a critical element in human interaction and in society. Enhances effective communication and informed use of the mass media."

Objectives: "Compare and contrast models of the communication process"; "Explain the influences of perception, self-concept, language, nonverbal behaviors, and culture on communication."; "Analyze messages of mass communication/mass media"; "Explain the relevance of ethics to the communication process"

Basic Public Speaking (KCTCS/COM181)

Summary: "Gives platform experience in the fundamentals of effective speaking."

Objectives: "Identify elements of the oral communication process/model"; "Construct outlines containing an introduction, body, and conclusion and following a logical pattern of organization"; "Demonstrate appropriate topic selection, topic narrowing, and development of a central idea/thesis statement"; "Employ appropriate verbal and nonverbal communication when delivering oral presentations"; "Select and use appropriate supporting materials for informative speeches and persuasive speeches"

Persuasive Speaking (KCTCS/COM287)

Summary: "Examines the processes involved in attitude change, with emphasis on the preparation and delivery of persuasive messages."

Objectives: "Explain persuasion as a communication process"; "Demonstrate appropriate research, organizational, and delivery skills for persuasive speaking"; "Distinguish between ethical and unethical persuasive techniques"; "Use persuasive theories and techniques in constructing persuasive messages"

Writing II (KCTCS/ENG102)

Summary: "Emphasizes argumentative writing. Provides further instruction in drafting and systematically revising essays that express ideas in Standard English. Includes continued instruction and practice in reading critically, thinking logically, responding to texts, addressing specific audiences, and researching and documenting credible academic sources."

Objectives: "Research topics to support an effective argument"; "Write with a fluent, versatile prose style"; "Analyze critically an assigned text"

In order, the first four courses we may collectively label "Software Engineering" courses, representing learning environments in which software projects are deliberated at length, as opposed to courses more strictly technical in nature like WKU's introductions to programming. The second set of four courses we may label "Rhetoric" courses, representing those in which strategies of communication are approached with a primarily analytical lens; this includes courses on rhetoric, genre, feminism, critical theory, and so on. And the final set of four courses we may label "Composition" courses, representing those in which practice applying theories in the creation of works is central to the student's outcomes; this includes first-year composition, creative writing, and advanced composition. The division of the courses into three equal sets of four was coincidental and not an objective during the search and grouping of course lists.

I found it beneficial, in approaching the question of how rhetorically analyzing works like Schiffer's might benefit these courses, to ask myself a series of fifty-four questions along four axes in the form, "How can a rhetorical analysis of conference talks, *W* and *X*, be used to develop *Y* in the *Z* classroom?"

W was either "as scaffolded by some preliminary activity" or "as scaffolding for

some primary activity." This axis was selected to represent the idea of "second" readings as developed by Honor Moorman in pairing visual works with poetry [7]. Moorman draws upon evidence that comprehension improves in a second reading of a work and recognizes the constraints of the classroom's time. Therefore, she introduces texts with a "first reading" of a related work of art, thereby scaffolding the text visually and dialogically. With this in mind, we may envision two uses of conference talks in the classroom: in their use to prepare the "second" reading of some related work; or in its use as a work in its own right, one that the students have been prepared to approach as a text for a "second" time.

X was either "as a solo homework activity," "as a face-to-face group project," or "as a class discussion." This axis was selected to represent the different social complexities, and thus communication strategies and delivery timings, of the assignment itself. A solo activity most likely refers to homework, as in-class solo work frequently leads into group- or class-level work, so I have made the restriction explicit here. A group project, when communicated online without instructor supervision or careful scaffolding, might tend towards asyncronous communications between the involved students, so activities may become, in a sense, studentassigned solo homework, albeit assignments that are purposefully coordinated towards some group-level purpose; therefore, I have made the explicit restriction to consider only face-to-face group projects; one may intuit that real-time communications, over Skype or Google Hangouts or some similar technology, might serve the same purpose, but I see no benefit for present discussion to make further distinction here. And finally a class-level activity, which I have called a "discussion," more accurately refers to any class-wide "coming together" and subsequent review of ideas, feedback, and so on; again, I posit that a discussion board activity online might have communication patterns more similar to solo work, so I make the restriction implicit in the word "discussion" that we are refering to a

face-to-face or other real-time situation; there are, of course, many different tactics to class-level activites, tactics that I explored in the exercise.

Y was either "Remembering and Understanding," "Applying and Analyzing," or "Evaluating and Creating." This axis was selected to represent the levels of Bloom's taxonomy, simplified to three pairs [2]. Although there are certainly distinctions within these pairs, I cannot foresee much use for our present goals in making those distinctions. The granularity of three tiers should suffice.

Z was either "Software Engineering," "Rhetoric, Professional Writing, and Communications Studies" or "English Composition." This axis was selected to represent the three subject areas where a discussion of conference talks may hold some merit towards meeting the objectives of the course, and it aligns with the divisions of the course listing above. Software Engineering students may benefit from both a discussion of a talk's subject matter and their rhetorical strategies as a means to reflect upon their own styles of communicating. Rhetoric students may benefit from a more thorough analysis of a talk's strategies and their audience responses, with little or no attention, apart from necessary background information, to the technical content itself. And Composition students may benefit from adapting a talk's strategies, both those employed and those advised by the speaker to the audience, as models for their own work. I believe that these three subject area groupings most accurately reflect those that would benefit from such an activity. Further, I believe this granularity of division between the subject areas is necessary to imagine assignment types that align well with the disparate teaching strategies already present in these areas. For other subject areas that might benefit from such rhetorical analyses, I believe that drawing similarities to the results of our discussion here will suffice.

As I attended to these fifty-four questions, I did so individually. That is, I strove not to make top-down predictions based on the intersections of these pedagogical theories, and instead attempted to imagine for each question, based on my own experiences teaching computer science and as a student of the Rhetoric and Composition program, the material pedagogical situations that the question might comprise. However, not all questions were equal. Several combinations of the above axes produced a description of a situation that was either uninteresting or pedagogically strange. For example, what use is there in scaffolding an already low-level "Remembering and Understanding" assignment? It was possible to imagine scenarios where this was plausible, such as introducing rhetoric students to the "alien" terminology of technical fields to help them apply their English-domain analytical knowledge to that content area. Still, such a construction seemed eso-teric compared to others.

The results of this pedagogical exercise follow. For each of our three subject areas, I provide a lesson plan and discuss more theoretically its envisioned uses and benefits with regards to the course list above. Note, none of the lesson plans, in their final revisions by the end of this exercise, fell neatly into any one of the fifty-four imagined scenarios, and instead draw from a range of strategies accordingly. Therefore, our theoretical discussion is informed by a coverage of multiple pedagogical scenarios.

The assignments are presented here in order of increasing complexity. Software Engineering aligned the most with our axes above and thus comes first; and Rhetoric aligned the least and is presented last.

*

Title:	Critical Requirements Identification
Subject:	Software Engineering
Level:	Sophomore
Bloom:	Applying and Analyzing
Objectives:	Identity, Role in Society, Tools, Terminology, Planning, Research, Documentation,
	Communication
Sizing:	Groups of 3-4 or 2-3 if under 12 students
Timing:	One and a half class sessions
Tie-In:	Scaffolded by a self-reflective activity on the role of software developers. Prepped
	by readings on requirements analysis techniques. Scaffolds requirements planning
	software project on a self-assigned topic.
Description:	Session 1. Group students. Randomly assign each group a conference video. Permit
	students time to watch their assigned video as a group. Hand out the following
	prompt. Permit students time to answer Part 1 of the prompt as a group. Reserve
	time at the end to share and discuss Part 1 answers as a class.
	Session 2. Permit students time to research and answer Part 2 of the prompt as a
	group. Collect Part 2 answers for grading. Assess on participation. Comment on
	improvements. Optionally, reserve time at the end to lecture over writing specific,
	measurable, and purposeful requirements.
Prompt:	Part 1. Question 1. State in your own words the speaker's argument regarding the
	role of software developers in society. Question 2. In the speaker's talk, they
	described the creation of one software project in particular. What is this project?
	What was the project's original intention? Who are its users today?
	Part 2. Question 1. Imagine your group had the opportunity to create a project
	similar to the one in your video from our last meeting. What would you make?
	Question 2. What is the <i>raison d'être</i> of your project? Who are its users? Question 3.
	Imagine your project is complete and perfect. What are the components of this
	finished project? What are all the requirements you must meet to get there?
	Question 4. Research online for software APIs (such as jQuery plugins, etc.) that
	could aid in completing this project. For each you find, describe what it does and
	explicitly state which requirements it helps meet. Question 5. As far as you can tell,
	what overhead might be introduced by these APIs?

The goal of this assignment is two-fold: to permit the students opportunity to observe the potential for "messiness" when deliberating software requirements, thus requiring them to reconcile the needs of many voices; and to place dialectically side-by-side the voices of multiple members of their future community. For this assignment, I suggest talks that are between twenty-five and thirty-five minutes and that demonstrate the types of incongruencies that may appear during the requirements deliberation phases of the software development life cycle, such as Schiffer's talk at Thunder Plains 2014.

Because the students are not coming from a rhetoric studies background, we spend two days viewing and discussing this collection of videos in groups. On the first, our focus is on drawing attention to the relationships between the developer as a self with a unique identity, the intentions and inspirations of the project, the needs and experiences of the end-users, and the demands of the community of contributors that support the project. On the second, our focus is shifted to place the students in the shoes of their speaker, asking them to envision a project similar to what was described in their assigned video. From here, they practice communication and team skills as they carry out model requirements analyses. Finally, we draw the threads further, asking the students to consider the software tools that may help them meet these requirements; we never program alone, and in this assignment we are reminding the students of this, placing them within the larger *kairos* of the software development community.

I envision this assignment at the Sophomore level due to two points: the "lightness" of the assignment itself, as students are not being asked to produce what one would expect from a larger group project extended over multiple weeks; and the need of addressing identity early on in their academic career, thereby making explicit the lived experiences of those that have graduated from these same sorts of programs before them. Therefore, of the Software Engineering courses

listed above, I believe this assignment could readily be adapted for the Freshman level The Computer Science Profession (UK/CS100) course or, at the other end of the spectrum, Requirements Engineering (UK/CS617); in the latter case, we may find it most appropriate to this activity to scaffold both a real world case study–software development for local businesses—and an accompanying end-of-semester conference presentation, much in the same style as those modeled here.



Title:	Model-Based Satirical Voice and Strategies
Subject:	Composition
Level:	Sophomore or Junior
Bloom:	Evaluating and Creating
Objectives:	Attitude, Persuasion, Research, Organization, Delivery, Ethical uses of Persuasion,
	Drafting and Revision, Responding to Texts, Audience Awareness
Sizing:	Solo
Timing:	Four class sessions
Tie-In:	Scaffolded by discovering topics and constructing arguments. Scaffolds developing
	connections with the audience.
Description:	Session 1. Watch conference talk video on projector. Ask students to note rhetorical
	strategies used and suggested. Discussion of notes taken. Collaboratively compose
	small example on projector. Reserve time at the end to hand out and answer
	questions about the prompt. Early drafts are due hour before next session to
	discussion board.
	Session 2. Select two early draft submissions for discussion. Review selected
	submissions on projector. Break into groups and peer review individual early
	drafts.
	Session 3. Lesson and discussion on effective use of genre. Reserve time at the end
	for students to compose and get individual attention. Revised drafts are due hour
	before next session to discussion board.
	Session 4. Review revised drafts as done in session 2. Final drafts due next session.
Prompt:	In any written genre of your choice-newspaper, blog post, short story,, imagine
	yourself a satirical "character." Use this character to experiment with voice on the
	page and consider an issue from alternative perspectives. Choose a topic that is
	both simple and that you have strong feelings about, such as how hard it is to get
	your hand inside of a Pringle can or how weird it is that Hot Pockets are just food
	wrapped up in envelopes made of themselves. You will be graded on affect, not
	length. There will be three draft submissions. Use your Early Draft to feel out the
	right topic and angle. Use your Revised Draft to experiment with genre and
	delivery. And in your Final Draft bring it all together.

In this assignment, structured with multiple scaffolded drafts and opportuni-

ties for feedback, our goal is to permit the students to experiment with voice, genre, and satirization. Using satirical conference talks as a model, we guide the students through understanding the connections between and potential for "challenges to the form" to carry out successful social critiques.

The assignment is carried out over four sessions, imagined at two sessions per week. In the first, we introduce the assignment, model expectations, and answer preliminary questions. In the second, we discuss two students' early drafts to attend to topics and angles early on, as the non-traditional writing opportunity may initially—or throughout—prompt more anxiety than excitement. Since this is not an academic essay, any practice that the students have in the discovery of topics and information may not translate into the new genre. In the third session, we help the students plan the structure and voice of their paper by lecturing—at the very least—theories on the purpose of genre. Finally, in the fourth session we mirror the second, this time reviewing sample revised drafts with attention to the argument and delivery as a whole, coherent piece with a clear goal.

Although it may be possible to teach this lesson in Introduction to Communication (KCTCS/COM101) and Basic Public Speaking (KCTCS/COM181), I believe doing so may detract from methods that may more closely align with the objectives of the course. Between Persuasive Speaking (KCTCS/COM287) and Writing II (KCTCS/ENG102) though, we may find that the lesson here aligns well with their focus on persuasion. By using this assignment as a contrast to traditional forms, we allow the students to model alternative approaches to persuasion, thereby highlighting the effects and nuances in those traditional approaches. Finally, by permitting students an opportunity to experiment, they may gain strength in both voice and *kairotic* adaptability.

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Title:	Non-traditional Theories of Communication Unit
Subject:	Rhetoric
Level:	Junior
Bloom:	Applying and Analyzing
Objectives:	Verbal vs. Non-Verbal, Kairos, Oral, Perspectives, Culture, Gender, Ethics,
	Perception, Genre, Identity, Experience, Critical Analysis, Symbolism,
	Psychological, Feminist, Interpretation, Values, Beliefs, Persuasion
Sizing:	Primarily Solo. Secondarily Class-Wide. Tertiarily Groups of 2-3 or 3-5 if over 30
	students
Timing:	Four class sessions
Tie-In:	Scaffolded by traditional rhetorical analysis. Prepped by chapter or article reading.
	Scaffolds applying arbitrary rhetorical frameworks to cross-discipline texts.
Description:	Session 1. Socraticly argue we are drawn to certain hermeneutic uses of symbols.
	Contrast Symbol-Dramatism to ethos, pathos, logos. Solo work Part 1 with
	newspaper ad. Collect at end of class.
	Session 2. Review Part 1 answers. Socraticly argue what "know/feel/believe" owe
	to "sense." Compare Epicurus's epistemology to assumptions in strict <i>logos</i> . Solo
	work Part 2 with comedy clip. Collect at end of class. Assign Ullman reading.
	Session 3. Review highlighted Ullman passage. Compare dialectically to Part 2
	answers. Group work Part 3. Introduce Camus's Absurd. Connect to Epicurus's
	friendship. Watch movie clip. Assign Part 4.
	Session 4. Collect Part 4. Review answers. Review Session 2. Review Session 1.
	Solo exam Part 5 with conference talk video.
Prompt:	Part 1. Question 1. What repeat or prominent symbolic acts can you point out in
	the author's argument? How do these symbols "function" as the author uses them?
	How might they function for other authors? Questions 2-3. Repeat Question 1 for
	scene and agency. Question 4. How do these various symbols of act, scene, and
	agency connect to one another?
	Part 2. Question 1. According to their argument, what does the speaker appear to
	know/feel/sense/believe? Question 2. What experiences do you suppose led them
	to these beliefs? Question 3. What experience is the speaker sharing with or
	creating for you so that you will know/feel/sense/believe these things as well?

(continued from previous page)

Part 3. In the chapter by Ullman that we read for today, she talks about a "slim part of ourselves" and the notion of a "narrowed" self. But what would an "unnarrowed" human existence look like?

Part 4. Camus might say that Ullman's unnarrowed human is not definable but still observable. The movie clip that we watched in class was admittedly "absurd," but in what ways would you say that we can still observe in this scene an honest representation of a complete, unnarrowed human experience?

Part 5. Question 1. Point out one symbolic

act/actor/agency/attitude/purpose/scene of the speaker's argument. How does this symbol "function" as the speaker uses it? How might this symbol resonate/relate/identify with the audience to build a connection between the audience and the speaker as fellow humans? Question 2. Briefly, what experiences does the speaker bring to the talk, and what experiences do they construct for/with the audience as part of the presentation? Question 3. What issues, in the speaker's community, are they trying to point out or honestly articulate? What does the speaker propose we do about these issues, or how do they use their talk itself to model the appropriate behaviors/thought-processes they believe might solve these issues?

This final assignment is fundamentally about challenging assumptions about the nature of rhetorical structures. Because we are introducing the students to an inherently multi-faceted theory, I have broken the instruction into four sessions, each of the first three touching upon one of the theory's major movements and the final session providing the students an opportunity to review them in context of one another and draw them together in an exam-like setting. Directly preparing the students for this unit will be an assigned reading over a hypothetical conference or journal revision of the Theory chapter herein.

Although our theory itself begins with Epicurus, I believe it best to lead with

Burke. His approach to rhetoric builds directly from the students' previous experiences with *ethos*, *pathos*, and *logos* divisions, either within this course or a prerequisite. Whereas that traditional approach makes divisions based on the three *loci* of the self, the audience, and the subject matter, Burke directly contrasts this with no such division. He instead offers a language- or symbol-centric model. From this non-divisive and interpretive model, we introduce Burke's theories on identification as a way of connecting the symbols (and their functions) of the author's argument with those of the audience, thereby tangling the traditional divisions as we simultaneously make explicit the way language connects the inherently divided. Because we are challenging many fundamentals, the first assignment is intended to model questions the students may ask themselves in carrying out an introductory Burkean analysis. To accompany this assignment, I suggest a Coke-Cola newspaper ad. A cursory Google Image search provides several examples showing the brand's attempt to identity the product with the family, sports, and so on.

In the second session we challenge the students' view on logic-strict persuasion. One may find it pertinent to introduce the students to the term "specious" as a counter-example of apparently sound, but ultimately dishonest, arguments. By introducing Epicurean epistemics, we are regrounding the notion of *logos*-as-logic into *logos*-as-experience; this aligns closer with the original intention of the term as the "thing" of discussion. We also begin to see in this session the Burkean notion of genre as based in audience psychology, as we are connecting the experiences that the speaker brings to their argument with the experience that they thereby construct simultaneously with and for the audience. To accompany this assignment, I suggest the "Left Brain, Right Brain" clip from Bo Burnham's *What* comedy special [3]. One may find a second play-through of the clip required, as the connection to Burnham's lived experiences is not immediately apparent. However, the clip

directly pits *pathos* and *logos*-as-logic together, seeks to reconcile their differences, and interprets Burnham's character's experiences distinctly between his brain's two "voices." An analysis along the lines of *pathos* and *logos*-as-logic would reveal less insight into Burnham's overall intentions of the comedy special than analysis along the lines of sensory experience's effect upon the body and its perception of knowledge.

Between the second and third sessions—I imagine over a weekend—, the students are assigned a reading from Ullman's *Close to the Machine*. In particular, I am imagining pages 65 through 94, with the last two paragraphs of page 90 highlighted for particular focus. Although the subject matter is technical by name, Ullman's creative nonfiction should pose no barrier to understanding her narrative intentions, and the build up to the highlighted passages on the narrowed self are worth the benefits as we return from the weekend to discuss Camus's theories on the Absurd.

Contrasting the socractic introductions of the first two sessions, we briefly ask students to form groups and discuss within those groups their thoughts on the unnarrowed self. What *is* it really? As our discussions begin to resolve this question, we also find ourselves beginning to make connections dialectically between Ullman, Camus, and a return to Epicurus with a focus on his theories of friendship. Taking home their assignment this session, we permit the students sustained time to watch and re-watch a movie clip as necessary to "observe" that unnarrowed self. To accompany this assignment, I suggest a clip from Wes Anderson's *The Royal Tenenbaum's* [1]. Many may do. The "Needle in the Hay" scene may align well with Camus's subject of suicide, but I do not believe the benefit outweighs its graphic, triggering nature. Instead one may find the "Me and Julio" scene most appropriate, as it will task the students to consider the grandfather's attempt to reclaim lost time with his grandchildren (and to unnarrow both the end of his own

life and the promise of theirs).

Finally, on the last session of the unit, we review, most-recent first, the major movements of the theory and make explicit the most important connections between them. I say most important for two reasons. First, deeper connections may develop with sustained attention throughout the unit to the article assigned at its prep. One goal of the above activities, we may note, is to make that reading more palatable over time. Second, sufficient time during the session must be permitted for the students to actually practice connecting these threads. Our recap must therefore be brief.

To this end, I have proposed an exam with three written responses, each the length of approximately one to two paragraphs and each drawing upon a different perspective of the theory. To accompany this assignment, I suggest Lisa Hanawalt's presentation at the XOXO 2015 conference or Simone Giertz's at the same conference a year later [5, 4]. Although Hanawalt's talk connects to the satire and black comedy *Bojack Horseman*, itself ripe for analyses such as this, it is twice the length as Giertz's–approximately twenty minutes compared to ten. Therefore, time constraints may dictate the selection. Regardless of the video, this assignment will require coaching on effective techniques when carrying out analyes of videos. Unlike written texts, one cannot skim the structure of the video, skip accurately between sections, or sensibly speed up, slow down, or go back to something missed; further, any strategy that promotes stenographic methods does so at the sacrifice of having one's eyes down when the speaker does something visually noteworthy. Therefore, I suggest pacing the session for students to have "time and a half" just in watching and re-watching the video assigned.

I have stated in the prompt that I envision this course being taught to Junior students, this being due to the pacing and theoretical nature of the assignment. However, one may find no difficulty in spacing the sessions further apart to pro-

vide additional scaffolding and time engaged with the material at a Sophomore level. In Introduction to Interpersonal Communication (KCTCS/COM252), this unit can be repaced and assignment texts selected to not only draw attention to the course objective of "perspective-taking," but also to analyze how speakers are *presenting* perspectives as a rhetorical tactic in itself. In Literature and Genre (KCTCS/ENG231), the mix of written and video texts provide an opportunity to compare the manifestation of Burkean symbolism in visual, textual, audial, and temporal media. In Literature and Identities (KCTCS/ENG233), the work of challenging structural models goes a long way towards breaking down the walls of identity. And finally in Introduction to Women's Literature (KCTCS/ENG234), our theory of communication aligns well with course objectives regarding symbolism, perspective, interpretation, and beliefs; is directly positioned to tackle questions of diversity, inclusion, and the symbols and rhetorical practices that govern these discussions; and, depending on the texts selected, presents students an opportunity to read women doing work in non-literary fields through a non-traditional lens.

Sources

- [1] Anderson, Wes. The Royal Tenenbaum's. 2001.
- [2] Bloom, Benjamin. *Taxonomy of Educational Objectives, Handbook 1: Cognitive Domain* Addison-Wesley. 1956.
- [3] Burnham, Bo. What. 2013.
- [4] Giertz, Simone. *Queen of Shitty Robots*. XOXO Festival: Portland, Oregon. September 11, 2016.
- [5] Hanawalt, Lisa. *BoJack Horseman*. XOXO Festival: Portland, Oregon. September 11, 2016.
- [6] KCTCS 2017-2018 Course Catalog. Kentucky Community and Technical College System. 2017.
- [7] Moorman, Honor. "Backing into Ekphrasis: Reading and Writing Poetry about Visual Art". *The English Journal*: 91(1). 46–53. 2006.
- [8] *University of Kentucky 2017-2018 Course Catalog*. University of Kentucky. 2017.
- [9] Western Kentucky University 2017-2018 Course Catalog. Western Kentucky University. 2017.

Conclusion/Reflection

Two years ago, I concluded my first masters thesis saying:

Don't gamble, if you can avoid it.... Don't overcommit, if you can avoid it.... And don't ever tempt the oracle. Information about the far future is only useful when that future is certain—in which case, who cares if we know what that future has to hold. Either we have a say in the cards we're dealt, or we are along for the ride. Regardless, the Unknown is ahead of us. It is unimaginably large, holding untold secrets, ills, and fortunes. And it begs to be explored.

Dr. Mustafa Atici, my advisor for the thesis project, and I had proposed, solved, and—that solution being incomputable—approximated various computable but sufficiently optimal solutions to what we called the "Safest with Sight" problem (SWS). The rules of the game—inspired by my bike rides each morning four years prior during the summer of WKU's many reconstructions—were that a pathfinder tasked with crossing the sidewalk map of campus whose links may be "up" (safe for passage) or "down" (blocked by construction) could use vision and the *anticipation* of this vision to its advantage, but was not allowed to backtrack, go off-road, or cross a downed link. Reduced to the general language of probabilities and algorithms, the metaphor we believed could carry to roadways, digital networks, decision making, and so on.

We based this conclusion—we closed with an attempt at life lessons learned—on our best approximation to the problem, which we had named "incident vision." After the application of a few optimization techniques general between all approximation schemes, this approach operated by discarding any lines of sight that did not provide information that was immediately consumable. For example, a non-incident line of sight would be like seeing from the vantage point of a hill the status of the cars several intersections down the road; because there are decisions we must make (turns to take or not take) before we reach those intersections, the information we receive from this hill is not immediately consumable. And in our simulations of the problem, discarding this information came with little cost to accuracy.

This methodology of reflecting upon life after the exploration of systems theoretic models is common in the complex systems field. The systems theoretic canon holds that these models' dynamics should emerge equivalently regardless of the actuality of the system in question so long as the system exhibits the same patterns of interconnections that were theorized in the model. During my undergraduate years, I maintained a blog on this subject, reviewing complex systems papers and re-imagining the metaphors of each for a more general audience. And the conclusion above is a long way forward from what I had written in the blog just a few months prior regarding certainty, my then-recent break-up with my ex-fianc'ee, and two imagined selves—past and future Bryan:

I think I grabbed that ring because I didn't want her to pawn it. I didn't want it to go away. I didn't want to remember what changes *she* had been through, becoming a person I didn't know or couldn't trust. I wanted to keep it to give it back, to give *something* back to *past Bryan*. Because somewhere along the way, I stopped being him. I stopped being *future Bryan*, and I stopped being the reasoning machine Herbert

Simon reduced me to. I stopped writing this blog, too, and I lost whatever practice I had going two years ago. That, I can get back by taking a second masters, this time in Rhetoric and Composition, but *past Bryan's* certainty is gone.

I can't account for the future with certainty. Any forseeable plans I have will undoubtedly change; all models of the world are wrong, even if some have been useful so far. I can preach system's thinking as a means for understanding the world in all its complexity, but the world won't stop being complex. Seeking better understanding will make us stronger, as a species, and it will make us more productive and it will save lives, but it will never console us. *I* have to be brave. I have to do that for myself.

And yet, although I had come a long way in my wrangling with "uncertainty," something about that thesis's conclusions did not set right on my conscience.

In trying to reconcile my thesis's formalizations of certainty with my lived-experiences of knowledge and decision making, I found myself reading Ziff's *Epistemic Analysis*, then Taleb's *Antifragile* [2, 1], then the writings of famed Stoic Marcus Aurelius. All three smelt of incongruency with life—they read like *jerks*. Although the SWS algorithm has implications for the full gamut of decision making processes, it in reality can only account for other humans as points of data—hard *yes* and *no* binary answers that, albeit unavailable to us at present, have probabilistic potentials in the future.

At what point does "certainty" account for the human experience? for depression? for cognitive behavior therapy? for a fluid gender? Where in the computer science methodology is there space for empathy, real and *lived* and non-formalized empathy? *These* are the questions I had been, since six years ago today when I first conceived of that project, truly trying to answer. But my formulations were

repeatedly non-productive in that conversation.

*

The first semester of the Rhetoric and Composition program, I struggled. This was before the CBT, and while I wracked my head in search of methodology to reconcile my above questions, I was working a full time job doing database work for Fruit of the Loom and taking nine credit hours of literature and pedagogy courses. I was stretched thin and over-connecting concepts between my two lives.

My first substantial attempt at reconciliation concluded as follows, from the closing paragraph of a term paper over the King Arthur canon:

To claim that confusion and contradiction are avoidable in life and psychological realism, either in or out of the Arthurian tradition, would be itself folly incoherent with the acceptance that, as decision makers operating under bounded rationality, the conclusion of learning is the mapping of the unknowable. But, after all, unavoidability does not imply unrecognizability. Certainty is not a fact of life, but I believe that uncertainty is not either. I believe that the longing for certainty is a longing for sense to be made. I believe that the prompt of reconciliation is that longing, that the quest is not prompted by knowing of the Grail, but desiring it too.

What underpinned these lines was an attempt at marrying the philosophical calls of three Arthurian texts with a complex systems science model called the "phase transition."

The idea was that information itself has the power to create a figurative pressure—or as I argued in the paper, literal pressure in the material sense of the subject's excited state—, which may correspond to the natural functional patterns that govern steam and so on. Viewing empathy at the time as a "drawing towards," I wanted to know how information itself might constitute the material

force behind that motion. These theoretical ramblings produced—well, to say the least—interesting analyses of the Arthurian canon. I saw in those texts a medium for questioning irreconciled thoughts, like the purpose of war, the limitations of memory and death, and apparent hypocrisy in carrying the failed banners of those that came before us. Yet, the marriage failed to address those central endeavors. I was still stuck on the formalization of knowledge into countable concepts under the banner of "certainty," and under the mystical "Grail" I was exploring the origin of human motives as though it were a data flow in a meat-suit program. I had not given a name to–permitted myself to write about–experience as a *logos* in its own right.

Help came in creative writing. Six months into the program I sent the following to my experimental memoir instructor, Dr. Dale Rigby:

The twists and turns so far have led me to: poststructurally and epistemically, I find the True/False dichotomy exhausting/depressing, and the Subjective/Objective dichotomy just the same thing in flashy academic clothes; instead, I've opted for a more personally meaningful framing, which I think I mentioned to you briefly at Spencers that one time, of being present (literally a term chosen for its "presentness" connotations when regarding depressive states) with the subject and letting the audience be present with you. This opening-through-presentness must be mutual however, lest we find ourselves intellectualizing or arguing for argument's sake. It must be a mutual presentness, symmetric, one who takes time to eat taking time to shit too. I am looking for the compassionate non-sucker, to slap a modifier on an NNTaleb term, equivalently the stoic sans-defensiveness.

It was here that our present theory of communication began, the phrase "compassionate non-sucker" (I had in mind at the time an Aurelius with a happier fam-

ily life) eventually leading me to our own Epicurus. This anxiety-ridden email is an origin story, an attempt at reconciliation between the philosophies of technology and the reason for and of empathy. This present project arose from those early epistemic struggles once I constrained myself to the narrow focus of rhetorically analyzing Schiffer. And with the recommendations of my thesis committee and various professors to read Burke, Camus, and Wittgenstein, this email to Dale has grown to encompass more than the strict-*logos* of that young, bike-riding computer science undergraduate.



So how will we conclude *this* project? What have our goals been? How will we articulate what it is that we have hoped to achieve?

In our *Kairos* chapter we recounted the news of several years of tension on the web, but we cannot possibly hope to resolve the system that produces—it would seem—new trouble every two weeks. In our Theory chapter we drew the strings together of a pedigree of theorists, and although we might call this a literary theory for the analysis of a certain breed of texts exhibiting what we have called *p-logos*, it would be juvenile to call what we have written a complete philosophy. Questions of a higher order of complexity—justice, law, politics—would be ill-fit by our approach; besides, as Philodemus knew well, Epicurus was not one for politics, let alone the classical schools of rhetoric. In our Analysis chapter we were able to remark upon the stylistic fingerprint, so to say, of Schiffer, and in the subsequent Pedagogy chapter we thought of ways to introduce conference talks such as hers into the classroom; I have no doubt matured rhetorically through the exercise alone of comparing my strategies and hers, and I cannot say that I would not be excited to find these approaches demonstrated by my students, but this goal smells, well, auxiliary.

What I am most sure that I can say, it is my sincere hope–down to the caramel

apple core of my personal endeavors—that we have at least answered those questions on the space for empathy within the tech community and made the conversation around these questions more productive.

What we have provided is not a formal model. It is not an algorithm or a framework, but a theory of communication grounded in our very *duty* to language. We are by nature divided, and we are by inescapable limitations in the dark of Plato's cave of uncertainty. But it is our agency in language that reconciles these concerns. Language makes possible our empathy to one another. Language gives us the tools to reflect upon our sensory experiences and imagine wonders with our symbolically driven hermeneutics. And although we cannot put into definitions the whole of the unnarrowed human existence, we *know*—we can *articulate without fear*—that this is an existence worth striving the best for, an existence that is wholly our own, and an existence we owe inseparably to others.

Regardless of the walls that divide us and the media we use to knock them down, we are each of us an ego worth living in a world of the colloquia that make us happy.

Thank you all for your time, and have a good day.

Sources

- [1] Nassim Nicholas. *Antifragile: Things That Gain from Disorder*. Random House. 2012.
- [2] Ziff, Paul. Epistemic Analysis. Springer. 1984.