"It Was Really All About Books:" Speech-like Techno-Masculinity in the Rhetoric of Dot-Com Era Web Design Books

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The future of Human-computer interaction (HCI) communication requires researchers to develop a strong understanding of the factors that influence design practitioners. As a step towards building that understanding, based on interviews conducted with veteran web designers, we analyze a corpus of popular web design books published during and shortly after the dot-com boom. Using a combination of ethnographic methods and discourse analysis, we identify the rhetorical strategies in these books and why they were successful in shaping our participants' ideas about web design. We find that the books exhibit a particular style of technical writing defined by a *speech-like techno-masculinity*. Despite their short shelf-lives, the books and their writing style contributed to the disciplinary identity of web design which exists today. Studying the history of best practice books is an important opportunity to reflect on the genre of best practices in design, and how we should frame them in the future.

CCS Concepts: • **Social and professional topics** → **History of computing**; *Socio-technical systems*; • **Information systems** → **Web interfaces**; • **Human-centered computing** → **HCI theory, concepts and models**;

Additional Key Words and Phrases: Design history, silicon valley, masculinity, Internet studies, design pedagogy

1 INTRODUCTION

> We do not really do books anymore. But back in the day that was the only thing. We, I mean, there was stuff online, but it was really all about books.
>
> > – P5, a web designer for 20 years

In the late 1990's, the advent of business-to-consumer e-commerce led to massive business interest in the world wide web: the so-called "dot-com boom" [65]. This drove demand for a new genre

of resources—namely, web design books—to help professionals learn to create websites. These first books educated readers about programming websites but did not address design in a broader sense. Against this backdrop, the second generation of texts emerged, written by web luminaries like David Siegel, Jakob Nielsen, Seth Godin, and Vincent Flanders; these books did not teach their readers how to make a website, but instead taught more abstract design principles related to usability and information architecture, in addition to visual design. This article concerns a corpus of such texts which came at a crucial point in the development of the web, when both design principles and a disciplinary culture were developing. Despite their short shelf-lives, these books offer insight into how the authors, some of whom were human-computer interaction researchers, shaped the core values of web design as a discipline.

Human-computer interaction (**HCI**) is usually seen as forward-facing and scientific [56]. However, some work in HCI now embraces methods from the humanities [2], with a renewed focus on history [27, 108]—especially the situated and plural nature of historical narrative [59]. Historical analysis offers HCI a reflexive lens on the contingent nature of our own field—how the current state of design is neither natural nor inevitable, but intimately tied to past events entrenched in power dynamics. Further, we can use such reflection to critically interrogate the sources of biases related to race and gender in computing [90] and to imagine alternative futures for design.

HCI also seeks to understand the bidirectional nature of influence between researchers and practitioners [44]. That communication process has come to the attention of the discipline recently as Translational HCI [4, 20, 86]. Colusso et al. [20] argue that HCI does not exhibit a strict divide between research and practice where knowledge flows in one direction, but instead exhibits a complex network of "researcher-practitioners" where information flows in multiple directions. Understanding the relationship between designers and their influences is essential to develop effective strategies for HCI communication; historical case studies, especially involving communicators whose work exists between research and practice, are rich [77, p. 242] for building such understanding.

Web design books of the dot-com era are one prominent form of this communication between research and practice. Of just the books included in our study, all have been cited in scholarly works. According to Google Scholar as of February 2022, those citations range from 4 (Curt Cloninger's Fresher Styles for Web Designers) to 7080 (Jakob Nielsen's Designing Web Usability) (M: 1106, SD: 1900, median: 287). These texts are often cited as authoritative work on web design.

We contend, however, that the books in our corpus are not written like authoritative academic texts, but instead in a characteristic style defined by their *speech-like techno-masculinity*. By "speech-like" we mean a style reminiscent of the rhetoric of conference talks, which we explore through Walter Ong's theory of secondary orality [75]. By "techno-masculinity" we mean a certain kind of "nerdy" masculine ethos which reflects the culture and norms of Silicon Valley and the zeitgeist of the dot-com boom, which we explore through R. W. Connell's theory of hegemonic masculinity [21, 23, 24, 50, 58]. Overall, in speech-like techno-masculinity, credibility comes from the author's confidence, expertise, and cultural knowledge, rather than through empirical evidence. Authors use hyperbolic claims for shock value, make subtly-gendered jokes to build solidarity with their imagined readers, re-frame web design and its history to support their personal claims to expertise, and establish dichotomies between different modes of thinking to legitimize web design. More than just a departure from academic style, we believe the particular character of this rhetoric may have had strong cultural effects on web design and its disciplinary identity. In the legacy of reflective design [90], we suggest using this history as an opportunity to question both the ways we conceptualize web design (and perhaps design in computing in general) in relation to other disciplines, and the frameworks we use to judge web design practices.

As a step towards understanding the impact and influence of these books, we present discourse analysis of a corpus of 18 dot-com era web design "best practice" books. These books were identified as having a strong influence on the work and teaching of participants in our prior study which explored historical changes in web design practices and values [43]. In this article, our primary concern is not the content of these books, but their style and rhetoric: how do the authors make recommendations, where do their justifications come from, and how do they participate in the construction of web design as a discipline? Discourse analysis has been used in existing work to study the construction of concepts often taken for granted in HCI—the construct of the user [23], for example. We believe such research can contribute to the study of both the history of web design and HCI communication more generally.

We make two contributions to HCI. We introduce the analysis of historical books that have been influential in web design to the HCI community, and provide the first—to the best of our knowledge—a systematic analysis of their rhetoric. Second, our analysis reveals common characteristics: a rhetorical style, which resembles that of conference talks and is steeped in the masculine ideals of Silicon Valley during the dot-com boom, which we label as *speech-like techno-masculinity*. Based on these contributions, we pose a set of recommendations for the HCI community to develop a more nuanced relationship with historical web design books, and speculate on how we might, in general, reconsider the design of "best practices" in the future.

Through our discourse analysis, we do not mean to judge any books for their quality, harm, or correctness, or to dispute their effectiveness in their goals—our participants identified them as major influences years later. Instead, we aim at critically considering them from a rhetorical perspective. While we use the term "masculine" to describe writing styles, we are not making claims about how men inherently write about web design; rather we are identifying a particular style as gendered, and relating it to societal expectations for the way men should think [21, 23, 94]. A masculine writing style is not limited to a particular author's gender.

2 RELATED WORK

Our research on the history of web design books exists at the intersection of three scholarly conversations in different, but related, disciplines: design history, HCI, and Internet studies.

First, design historians are interested in understanding the development of visual culture on the web. While design history traditionally focuses on the history of objects, material culture, and graphic design [33], Ida Engholm argues that design historians should also study how concepts of genre and style extend to web design [31]. Engholm [30] also importantly presents the first discourse analysis among web design books. She highlights different frameworks for form and function in web design, including the usability oriented approach of Jakob Nielsen ([Nielsen-DesigningUsability], [Nielsen-PrioritizingUsability] in our analysis), the design-oriented approach of David Siegel ([Siegel-KillerSites]) and Curt Cloninger ([Cloninger-FreshStyles], [Cloninger-FresherStyles]) and the moderate stance taken by Jeffrey Zeldman. O'Connor [74] extends the study of this dialogue to analyze travel websites. Batschelet [3] connects Engholm's narrative between Siegel, Cloninger, and Zeldman to the history of web standards and the Web Standards Project's crusade for cascading style sheets. Thorlacius [99] approaches web design from the perspective of visual communication and semiotics. She makes use of terminology for web design styles from Engholm, who in turn borrowed them from Curt Cloninger, and analyzes Jakob Nielsen's website. The discourse analysis in this literature focuses on the design concepts presented in these texts. Our analysis builds on theirs, focusing more specifically on rhetoric.

Several design historians are interested in tracking the evolution of trends in web design. Jones [51] finds that between 1996 and 2006, corporate homepage designs converged, and argues that understanding the processes which drive web design innovation is important for the future of

business communication. Goree et al. [43] find a similar trend in a larger-scale investigation of websites, but point towards software libraries and mobile design practices which emerged after 2008 as possible causes. Cooke [22] argues that design across media has converged over time and that blurring of media boundaries calls for increasingly interdisciplinary inquiry into the design. These results reflect the reality that the visual design of the web has been influenced by a wide variety of non-visual factors, including web design books.

Second, HCI research is interested in several factors which are informed by the history of web design. Roedl and Stolterman [86] call for HCI research to better support design practice. This line of inquiry resembles that of translational science, which studies how ideas are translated from theoretical research to non-academic practice [106]. Colusso et al. [20] argue that the path towards that goal starts with developing a translational model specific to HCI. In line with work by Beck and Ekbia [4], they propose a continuum model where, instead of research being translated between separate "research" and "practice" communities, there is a single, continuous space of researcher-practitioners who communicate with each other. Our research constitutes empirical evaluation of that model by investigating how best-practice books, written by authors who span the theory-practice continuum, both influenced practitioners and the academic understanding of web design as a discipline [20].

HCI is also interested in the design aesthetics of the web. Moshagen and Thielsch [66] study visual aesthetics in web design, and the relationship between visual design and user experience. Chen et al. [13] identify a series of web design periods via interaction design criticism sessions. Their work suggests that contemporary designers can draw inspiration from historical websites and encourages research on the history of web design and the factors which instigate new design periods. We believe that such research requires a contextualized historical approach, incorporating texts which make recommendations about web design in addition to the designs themselves.

Finally, there is interest in developing methods and establishing sources for the history of the web. Niels Brügger has written about the use of archived webpages as historical sources [10], and how archived web sources differ from other structured text archives [9]. He argues that Internet Studies must develop its historiography and discuss questions about why we might want to study Internet history, how that history should be understood and periodized (or not), what primary and secondary sources should be used, and how those sources should be interpreted [8]. Along these lines, Bory et al. [6] investigate how Gillies & Cailliau's *How the Web Was Born* [11] and Berners-Lee's *Weaving the Web* [5] constructed a narrative around the creation of the World Wide Web. Spurgeon [96] studies the role that advertising has played in the development of the Internet as a commercial institution. Our work investigates how an under-studied corpus of books influenced the development of web design as a discipline and contributed to its historiography.

3 METHODS

Our inquiry began with a series of semi-structured interviews that we initially conducted to identify the causes of trends in web aesthetics (e.g., the overall homogenization of web design) [43]. Our interest in best practice books, and the corpus of books we investigated, emerged from that line of inquiry. Our methods include semi-structured interviews and discourse analysis of the corpus of books.

3.1 Semi-structured Interviews with Web Designers

We sought out professionals and semi-professionals with at least 15 years of web design experience via snowball sampling over email and social media. We recruited 11 participants (see Table 1), of which seven (64%) were men and four (36%) were women. Six (55%) were in North America, two (18%) were in Europe, and one (9%) was in each of South America, Asia, and Oceania,

respectively. While our participants are not all native English speakers, our results only speak to design trends for the English-language web. Semi-structured interviews were conducted remotely over the Zoom videoconferencing platform between May and July 2020, and each interview lasted between one and two hours. Before each interview, the participant was asked to prepare a portfolio of 4–7 representative websites which they helped design. We asked participants to explain the tools and processes they used to design each of these sites, and asked less-structured follow-up questions about their design decisions. The portfolios proved useful in grounding participant stories in concrete details of their design practices [89, p. 88]. All interviews were transcribed and anonymized.

As we performed analysis for our previous study [43], we were struck by the fact that many of our participants mentioned books as major influences on their work. That observation motivates the rest of our methods and findings. In this article, we focus on our corpus of books, but incorporate interview findings when appropriate. We analyze our interview transcripts using a constructivist grounded theory approach [12]. Interview transcripts were coded by the three authors to identify emergent themes with a focus on tools, processes, technologies, and historical events which shaped the designs of specific sites.

3.2 Discourse Analysis of Best Practice Books

Our corpus primarily consists of books that were mentioned by participants in our interviews. When referring to books, we use the notation [Lastname-AbbreviatedBooktitle] (instead of numbered citations) to ease readability. In total, 14 books were mentioned. Most books were only mentioned once, though [Nielsen-DesigningUsability] and [Godin-BigRedFez] were each mentioned by two participants, and [Krug-DontMake] was mentioned by three. We excluded two books for practical reasons. P1 mentioned using "for Dummies" books which we could not pin down to a single text, since a variety of such books were published during that time period. P5 mentioned *More Eric Meyer on CSS* alongside *Eric Meyer on CSS* ([Meyer-OnCSS]). After reading [Meyer-OnCSS], we decided that it was representative of both texts.

We included two books, which were not mentioned in interviews. We examined [Siegel-KillerSites] due to its prevalence in the secondary literature [30, 74, 99], and [VanDuyne-PatternsPrinciples] as an example of an academic book on design patterns to explore how best practice books might have shaped its style. We also attempted to find multiple versions of books whenever possible. Corrections, additions, and omissions in later editions ([VanDuyne-PatternsCreating]) and sequels ([Flanders-SonPagesSuck], [Nielsen-PrioritizingUsability], [Cloninger-FresherStyles]) provide insight into changes in both best practices and author perspectives. Including additional versions and sequels brings our total number of texts to 18, as shown in Table 2.

We read the books and scrutinized passages which either:

(1) echoed a theme we identified in our interviews, e.g., "above the fold" design, use of color theory, or table-based layouts;
(2) discussed the history of web design, or defined web design in relation to other disciplines;
(3) described the purpose of the book, including the author's reasons for writing or why designers should pay attention to their recommendations; and/or
(4) referenced other best practice books from our corpus or their authors.

After completing an initial pass through all the books, we engaged in an iterative process of memoing to identify themes across books. During this process, we wrote memos identifying topics within each passage, grouped passages according to emergent themes, and discussed the analysis of each specific passage in weekly meetings. Our goal was initially to uncover and explain the

Table 1. Interview Participant Information

Participant ID	Web Design Experience	Job Title
P1	25 years	Coordinator of Instructional Design
P2	20 years	Retired Freelance Web Designer
P3	20 years	Systems Engineer
P4	14 years	Digital Editor & Web Designer
P5	20 years	Lecturer & Freelance Web Designer
P6	25 years	Vice President of Digital Marketing
P7	27 years	Graduate Student
P8	25 years	UX Strategist, Designer & Trainer
P9	22 years	Java & Web Development Trainer
P10	27 years	Web Accessibility Officer
P11	26 years	Web Designer & Joomla Certified Admin.

influence of these books on our interview participants, however, the trends which emerged from our analysis pointed towards different findings. Rather than focus on the discussion of specific web design practices or technologies, during this stage of analysis we shifted to a discourse analysis, approach.

Discourse analysis examines not only what topics the books discuss but *how* they discuss them. In our meetings, we began to focus on the rhetoric of the passages and paid specific attention to how both best practices and web design, in general, were discursively constructed by the authors [80]. This process places more emphasis on close reading: we discussed the specific cultural references, rhetorical styles, and word choices. As such, our results do not prioritize the specific design recommendations or best practices themselves, but instead, the strategic way design practices were recommended and justified. As our analysis continued, we connected these themes to rhetorical theories. Such an approach has proven particularly effective in HCI and CSCW to understand how the legitimacy of actors and professions intersecting technology are established [97, 98].

4 "THIS WAS A REALLY LIFE-CHANGING BOOK FOR ME:" WEB DESIGN BOOKS IN OUR INTERVIEWS

In our interviews, participants often referenced best practice books and their authors as justifications or explanations for their early design decisions. These books had a formative impact on our participants—they learned best practices from these books, revered and sought connections to the authors, and readily disseminated knowledge from these books to others. We arrived at our corpus of best practice books directly from those results. In this section, we provide several examples of how books entered these conversations.

Our participants referenced books to explain how they learned to design websites and as authoritative sources to justify their design decisions. P5 references Jakob Nielsen: "He wrote Designing Web Usability, I think it was 1999 he published this. This was a really life-changing book for me, which is probably why I still have it…But this book was amazing to me because it planted in my head the concept that it's not your fault, you're not stupid, you know." Best practice books like [Nielsen-DesigningUsability] were P5's first encounter with design concepts like usability: if technology is difficult to use, it's not the user's fault for being stupid, it is a design failure. P9 explains his color choices by appealing to Seth Godin's writing: "To teach someone how to use that and the big consistent UI, you had to have bright green for everything that was good. So click on the bright green…I'm sure you're aware of Seth Godin, the Big Red Fez? It's a great…little book and it's very easy to read. He wrote that a web user is like a bunch of monkeys and they're running

Table 2. List of Best Practice Books Included in Our Study

Label	Title	Author	Year
[Siegel-KillerSites]	*Creating Killer Web Sites: The Art of Third Generation Site Design* [93]	David Siegel	1996
[Flanders-PagesThatSuck]	*Web Pages That Suck* [36]	Vincent Flanders & Michael Willis	1998
[Flanders-SonPagesSuck]	*Son of Web Pages That Suck* [35]	Vincent Flanders	2002
[Veen-ArtSci]	*The Art and Science of Web Design* [104]	Jeffrey Veen	2000
[Nielsen-DesigningUsability]	*Designing Web Usability* [70]	Jakob Nielsen	2000
[Nielsen-PrioritizingUsability]	*Prioritizing Web Usability* [71]	Jakob Nielsen & Hoa Loringer	2006
[Godin-BigRedFez]	*The Big Red Fez: How to Make Any Web Site Better* [41]	Seth Godin	2002
[Cloninger-FreshStyles]	*Fresh Styles for Web Designers* [17]	Curt Cloninger	2002
[Cloninger-FresherStyles]	*Fresher Styles for Web Designers* [18]	Curt Cloninger	2009
[Meyer-OnCSS]	*Eric Meyer on CSS* [63]	Eric Meyer	2002
[Powazek-DesignCommunity]	*Design for Community: the Art of Connecting Real People in Virtual Places* [82]	Derek Powazek	2002
[McGovern-ContentCritical]	*Content Critical: Gaining Competitive Advantage Through High-Quality Web Content* [62]	Gerry McGovern & Rob Norton	2002
[VanDuyne-PatternsPrinciples]	*The Design of Sites: Patterns, Principles, and Processes for Crafting a Customer-centered Web Experience* [102]	Douglas Van Duyne, James Landay, Jason Hong	2003
[VanDuyne-PatternsCreating]	*The Design of Sites: Patterns for Creating Winning Web Sites* [103]	Douglas Van Duyne James Landay, Jason Hong	2007
[Godin-PurpleCow]	*Purple Cow: Transform Your Business by Being Remarkable* [42]	Seth Godin	2003
[Garrett-ElementsExperience]	*The Elements of User Experience* [38]	Jessie James Garrett	2003
[Shea-ZenCSS]	*The Zen of CSS Design* [92]	Dave Shea & Molly Holzschlag	2005
[Krug-DontMake]	*Don't Make Me Think* [57]	Steve Krug	2006

Labels roughly follow a [FirstAuthor-FewWordsFromTitle] format. We included 18 books total representing the work of 20 authors.

through the site. And they're looking for the banana. The banana is the action color." To P9, the fact that the book was easy to read was an important part of its appeal and staying power, and its recommendations carry the authority to justify his design decisions.

Another theme is the significance of best practice books both to our participants and to web design in general. When discussing usability, P5 referred to Jesse James Garrett's *The Elements of User Experience* [Garrett-ElementsExperience]. "This book was pretty radical too and shaped...a lot of

my teaching. If I had to pick two that shaped my teaching, it would be this book, and Don't Make
Me Think [Krug-DontMake] by Steve Krug." After P9 brought up [Godin-BigRedFez], we asked
whether an 18-year-old book is still relevant to the web. He responded, "Still relevant. Absolutely."

Our participants emphasize the fame of the authors behind these books, and take pride in their
connections to them. P8 references how her work was featured in another of Godin's books, "At
one point I caught the eye of Seth Godin. Do you know who that is?…Seth Godin is a famous dude
who has written mountains of marketing books. And he was working on a book at the time called
The Purple Cow…and he put us in the book." P10 brings up Steve Krug and [Krug-DontMake]
when discussing his use of usability testing: "So you're probably familiar with Steve Krug and
Don't Make Me Think. So I'm actually a huge proponent of his. I've had the pleasure of having
dinner with him many times and learned a lot from him. Don't Make Me Think is still the single best
web book on web design in my opinion. I wish more people read that book." For these participants,
attracting the attention and respect of best practice book authors validates the quality of their work
and is a source of pride.

On a more subtle level, P10 discusses his opinion on usability and control, which bears striking
resemblance to a passage from a famous best practice book.

> One of my fundamental design tenets is let the user control what they want to control.
> That includes something as simple as launching new tabs or launching new windows.
> I've always been against that because I'm making that decision for them. If a user
> wants to launch a new window, they'll launch a new window, launch a new tab. If I
> do it for them, they might not realize what happened, especially for somebody using
> assistive technology. Then they go and hit the back button and it doesn't work.

This argument follows the cadence of a passage from [Nielsen-DesigningUsability p. 85]:

> Opening up new browser windows is like the vacuum cleaner sales person who starts
> a visit by emptying an ashtray on the customer's carpet. Don't pollute my screen with
> any more windows, thanks…If I want a new window, I'll open it myself!…Designers
> open new browser windows on the theory that it keeps users on their site. But even
> disregarding the user-hostile message implied in taking over the user's machine, the
> strategy is self-defeating because it disables the back button, which is the normal way
> users return to previous sites.

While P10 did not reference [Nielsen-DesigningUsability] directly, he internalized Nielsen's argu-
ment and rephrased it. These passages provide an example of the ways in which best practice
books affect contemporary web designers: P10 currently works as a Web Accessibility Officer and
while he might not be citing twenty-year-old books to justify his web design recommendations,
they have nonetheless influenced his thinking.

Our interview participants referenced other factors as influences on their designs as well, in-
cluding the designs of other websites (especially search engine pages), prior experience in graphic
design, online design tutorials like w3schools.com, and conference talks by both best practice book
authors from this period and by other well-known designers, developers, activists, and usability
experts. Nonetheless, in our interviews, a small collection of authors, along with their writing and
public speaking, were identified as highly influential. While making strong claims about patterns
of influence is difficult, the sheer fact that our participants referenced these books between 13 and
23 years after they were published speaks to their impact.

5   RHETORICAL CHARACTERISTICS OF OUR CORPUS

We now turn to present the main results of our analysis. Taken as a whole, the eighteen books
exhibited a distinctive rhetorical style characterized by five elements:

(1) appealing to their personal credibility in support of their claims. Authors engage in displays of expertise through detailed discussion of their personal experience with the web, as well as a more general "nerd" credibility;
(2) establishing solidarity with the reader through the use of humor and clever cultural references;
(3) holding readers' attention by making dramatic claims;
(4) justifying their design approach by using history as a rhetorical device; and
(5) defining web design and its relation to existing disciplines through dichotomies and in-group/out-group thinking.

While pervasive, not all books exhibit all of these rhetorical elements. Nonetheless, they are all interconnected—humor is used to establish nerd credibility, for example—and linked to an underlying speech-like techno-masculine style. We now discuss each stylistic element, analyze how the elements connect to one another and provide possible theoretical explanations.

5.1 Justification from Personal Credibility

When making recommendations, an author must justify their credibility. In classical rhetoric, this intuition is captured by the Aristotelian concept of *ethos*. We find, however, that appeals to credibility in our corpus are not limited to professional credibility, but also extend to a kind of cultural "nerd" credibility, and may be related to gendered gatekeeping structures like those observed by Turkle [100], Kendall [55], and Eglash [29]. Deeper than professional or cultural credibility, there is a sense of the authors as "tech gurus"—professionals with a deep, vaguely mystical understanding of technology and business similar to that of self-help book authors [88].

The concept of a "nerd" bears unpacking. Kendall describes the nerd as a "liminal masculine identity," involving intelligence, obscure knowledge, discomfort around women, and a general lack of socialization and physical ability [53]. The relationship between nerd culture and computing was famously studied in the 1980s by Turkle [100] who found, among other things, that computer science students preferred the pure, mental, unambiguous conversational partner of the computer to impure, physical, messy relationships with women. The stereotype of the nerd became a key fixture of American popular culture in the 1980's and 1990's, such as in *Revenge of the Nerds* [52] or *The Breakfast Club* [48]. Central to nerd identity is an inherent opposition to the "jock," a more traditionally American masculine identity involving physical ability, lack of intelligence, and dominance over women [53]. Nerd stereotypes also interact with concepts of race: Eglash [29] observes that stereotypes of coolness and sexuality inherent in blackness make the black nerd a cultural contradiction and implicitly create a "normative opposition between African-American identity and technology." As we will see, expertise, as constructed by the books we investigated, is tied to nerd identity.

5.1.1 Masculinity: Appeals to Expertise. In the first sentences of [Nielsen-DesigningUsability p. 4], Nielsen exemplifies this sort of expertise. He starts his book with a rhetorical question: why would he write a *paper* book about the web, instead of something digital? He answers, "I am a usability expert, so my choice of medium is governed by what is most usable for a given communications goal and not by what is most in fashion at any given time." He continues to explain the conditions under which he would give up writing books and then summarily claims, "hardware technology is the constraining factor and that we have to wait until approximately the year 2007 for books to go away and be fully replaced with online information. Legacy publishers be warned, this *will* happen." (emphasis in original)

While Nielsen's prophecy did not come to pass, his strength in making such a claim draws allegiance to a brash techno-futurism eager to dispose of the present. By starting his 440-page tome

on web design with the phrase "I am a usability expert," Nielsen gets straight to the point that his design decisions come from a position of expertise, not from what is fashionable, and are trustworthy as a result. Later on, while explaining the goals of the book, he justifies his observations of why "incorrect" approaches to design see use:

> This book is based on observations of usability tests with about 400 users from a wide variety of backgrounds and using a large number of different websites over the last six years. I have also drawn on lessons from the 10 years I worked on usability, online information systems, and hypertext during the dark ages before the Web. [Nielsen-DesigningUsability p. 32]

Nielsen emphasizes his identity and background. Though the web was still young at his time of writing, he had spent *six* years working on websites, and more before that on related topics. Rather than leaving such information to an "about the author" section on the back of the book, Nielsen places it front and center in the introduction to cement his expertise. Labeling the period before the web as the "dark ages" echoes the same techno-futurist mindset as predicting the end of paper books. His view of design methods as "correct" or "incorrect" is an effective strategy to instill doubt in the reader who may ask, *what if my designs are incorrect?* and encourages them to read on and educate themselves.

The best practice book authors also establish credibility using personal history to both relate to the reader and establish authority. In [Veen-ArtSci], Jeffrey Veen establishes his computing chops:

> My past is one shared by almost everyone with whom I consider a peer: early video games in elementary school, a Commodore 64 in junior high, and a Macintosh in college. I bring this up because there was a sensation I felt the first time I used a Mac in the dark basement lab at my alma matter. It was a feeling of being disconnected and empowered at the same time…I have spent the last five years of my life making Websites for HotWired, one of the first commercial publishers to focus its efforts exclusively online. These sites have relied on basic industry standards, have been funded through advertising, and have served a broad spectrum of technically literate users. [Veen-ArtSci p. xi]

Not only has Veen used the correct sequence of computers to establish his "nerd credibility," and discovered the empowering nature of usable technology in a *dark basement lab*, he also worked for one of the *first* commercial publishers, serving *technically literate* users. By claiming that everyone *he considers a peer* shared this specific sequence of experiences starting in childhood, he implies a concept of technical ability which cannot be reached in adulthood. This concept resembles the psychological "fixed mindset" which has been identified as a barrier to learning in CS education research [68] and linked with the folk pedagogy concept of a "geek gene" which students must have in order to succeed at programming [60]. Because he has the right background for tech (inaccessible to many others), we can trust his ideas.

Derek Powazek, who was also employed at HotWired, similarly presents an origin story in [Powazek-DesignCommunity] to describe how he became involved in web design.

> This book is the culmination of more than six years of doing nothing but eating, drinking, and thinking about the web. I discovered the web in 1995, just before I graduated from college with a degree in photojournalism…When I found the web it was like getting infected by a virus…I soon found myself staying up nights making homepages and working for clients on the side. Through my homepage (and a fair bit of good luck), I was hired by HotWired. [Powazek-DesignCommunity p. xxv]

Despite his degree in photojournalism, Powazek establishes credibility through his almost monastic dedication to the web, which paid off and got him a job. Because he was able to transition into technical work, he implies that the reader could make the same transition. Powazek's appeals mimic a certain kind of meritocratic techno-mysticism prevalent in Silicon Valley [26, 72]. There is a way to build a deep understanding of technology, but it requires working late nights and sacrificing other things like friends and family—and establishes the author's culture fit and legitimacy.

Nielsen, Veen, and Powazek all embody a style of technical self-confidence, which is undeniably masculine, but does not contain the hallmarks of traditional American masculine ideals like strength or independence which belong on the other side of the nerd-jock dichotomy. The alternative masculine ideal present in these texts can be analyzed through the lens of R. W. Connell's theory of hegemonic masculinity [21]. Connell observes that there are many different ways to be masculine, some of which are historically and locally situated. While not all of these entail exerting power over women, the existence of a hegemonic form of masculinity performed by a fraction of the population maintains patriarchal power structures.

In a study of fatherhood in Silicon Valley, Cooper applies this theory to identify a specific form of masculinity which is characterized by technical brilliance, devotion to work, and a desire to be seen as the "go-to guy" who can "get the job done" no matter how many hours it takes [24]. Such a masculinity is defined in opposition to traditionally dominant forms, and embraces the "nerd" side of the nerd-jock dichotomy [58], but is still hegemonically masculine. Wright identifies the same patterns in what she calls the "occupational masculinity of computing" and points out that such a culture tends towards devaluing women who do not make the aggressive displays of self-confidence expected in nerd masculinity [107].

5.1.2   Orality: Expertise Over Evidence. Appeals to professional experience are notable in these books because they are placed at the start and remove the burden of proof from the author going forward. This is not to say that best practice books are devoid of evidence: several books (e.g., [McGovern-ContentCritical], [Nielsen-DesigningUsability], [Nielsen-PrioritizingUsability]) make use of a variety of facts and figures, others (e.g., [Godin-BigRedFez], [Godin-PurpleCow]) reference successful companies as examples, and others use screenshots of existing sites (e.g., [Cloninger-FreshStyles], [Cloninger-FresherStyles], [Shea-ZenCSS], [Krug-DontMake]). However, the rhetorical space these books are working in places justification at the level of the author rather than the argument. Consider, for example, this confident passage from [Nielsen-DesigningUsability]:

> Because web users don't take the time to read through a lot of material, it is important to start each page with the conclusion. Present the most important material upfront, using the so-called inverted pyramid principle...The use of metaphors should also be limited, particularly in headings. Users might take you literally. Humor should be used with great caution on the Web...Also, users are so goal-driven that they often prefer "just the facts, thanks" without having to spend extra time on material that doesn't help them get in and out as fast as possible. [Nielsen-DesigningUsability p. 129]

Nielsen is making empirical claims, that "web users don't take the time to read" or "users are so goal-driven." If we read these claims literally, it is unclear which users he is referring to or how he was able to verify that all of them are this way. How HCI researchers write using the construct of the user is well-studied [23], but this passage is interesting in how it is justified. The claim on its own is not supported by evidence, but because the author has built up that he deserves our trust, it is easier to trust his recommendations. Use of the passive voice (e.g., "Humor should be used with great caution" instead of "Use humor with great caution") only strengthens that trust, evoking the tone of style guides and technical manuals. Despite the passive voice, though,

Nielsen's recommendations are not a positivist "view from nowhere" but come directly from him: a cynical reading might be that Nielsen's "users" are really just himself. From that interpretation, this passage does not contain a scientific design rule; Nielsen is merely expressing that he finds long, meandering web pages confusing and difficult to read.

Why do these books place so much emphasis on their authors? We present three possible interpretations. First, like many other elements of these books, the way the authors present themselves is steeped in the popular nonfiction culture of the 1990's, which was dominated by self-help books [61] like Covey's *The Seven Habits of Highly Effective People* [25] or Gray's *Men are from Mars, Women are from Venus* [45]. Arguments in these books were justified similarly, based on authors' guru-like expertise [88]. Second, despite having already bought a book, the reader is still a potential target of the author's advertising: the reader might hire the author as a consultant or speaker, or help build the author's brand. Such individual "branding" has developed into a major part of the hiring process in the decades since these books were published [39], and we conjecture that the writing style of best practice books helped fuel this trend, at least in web design. Third, the books' style is closer to oral rhetoric—a transcription of professional conference talks—and thus adheres to standards of evidence where the author's credibility is more important than the details of their argument.

This third interpretation tying the primacy of author identity with oral rhetoric is a more theoretical claim. In his work comparing the thought and language of oral and literate cultures, Ong develops a theory of "secondary orality," or oral culture within literate societies, contrasted with "primary orality" in cultures, which do not use writing [76].[1] In oral discourse, unlike literate discourse, claims do not need to be explicitly justified, since the listener is there to question any assumptions that they doubt. Additionally, highly analytical forms of evidence and nuanced claims, which are expected in written rhetoric, are less important than the orator's general credibility and whether their claims make sense (the Aristotelian concepts of rhetorical *ethos* and *logos* [83], respectively).
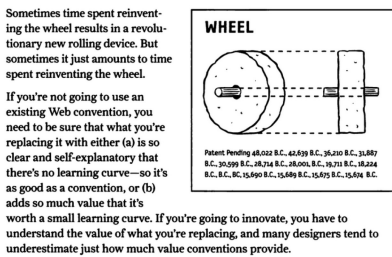
5.2 Use of Humor

Several books are filled with one-liners, cultural references, and visual gags. While these jokes do not tell the reader very much about web design, they help hold the reader's attention and establish a shared cultural basis with the author's imagined audience. Consequently, they also reinforce a cultural identity for web designers. Overall, these strategies allow the author to build trust.

5.2.1 *Orality: Imitating Spoken Jokes.* [Krug-DontMake] is fully written in a humorous style. For example, in this passage when Krug is discussing the way people search for information:
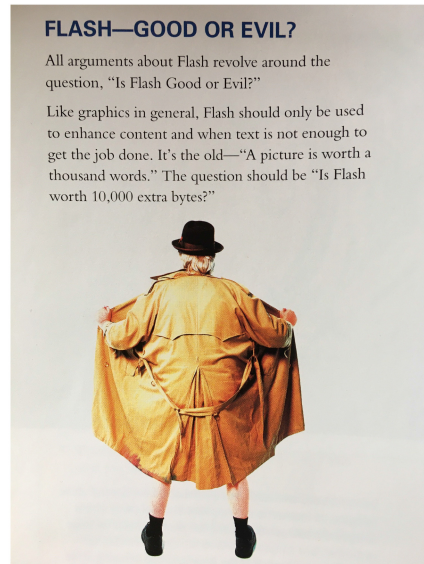
> You're usually trying to find something. In the "real" world it might be the emergency room or a can of baked beans. On the Web, it might be the cheapest 4-head VCR with Commercial Advance or the name of the actor in Casablanca who played the head-waiter at Rick's. [Krug-DontMake p. 54]

In a footnote, he adds the answer, and points out that the actors at Rick's Café "were actually famous European stage and screen actors who landed in Hollywood after fleeing the Nazis." Krug is mimicking a conversational style peppered with American pop culture references, demonstrating the same relaxed, confident "nerd credibility" we saw earlier in Veen and Powazek. Through the use of this style, Krug is attempting to relate to his readers. We could imagine him saying something

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[1]While we use elements of Ong's theory here as a lens of analysis, our corpus of web design books only exhibits a few characteristics of secondary orality, which is to be expected: though their rhetoric originates in a spoken conference culture, the authors are highly literate, and some have published books in other styles as well.

A visual gag from [Krug-DontMake].

A humorous visual juxtaposed with serious text in [Flanders-SonPagesSuck].

Fig. 1. Two examples of visual humor in our corpus. Left image (c) Peachpit Press, right image (c) John Wiley & Sons.

like *I'm a nerd, just like you, I'm not going to bully or lecture you, I'm just here to share some things I'm passionate about, like movie trivia and usability.* We reprint an example of visual humor in Figure 1 (left): the patent diagram spoof helps communicate Krug's point to not "reinvent the wheel."

A similar style comes through in [Flanders-PagesThatSuck]. Vincent Flanders seamlessly shifts from humor to serious design recommendations, and will often use the graphic elements of his pages to lighten the mood (Figure 1 right). For example,

> The only sound file anyone on the Internet is interested in hearing is O.J. Simpson confessing. They certainly don't want some random person welcoming them to a home page. Don't use sound files unless they're confessional in nature. If you *do* decide to use sound files, please inform your visitors how large they are by listing the size of the file next to the sound icon. [Flanders-PagesThatSuck p. 54]

The design recommendation to avoid sound files has nothing to do with the specifics of the O. J. Simpson trial, and making the reference to this shared experience in American pop culture mostly serves a stylistic purpose. This humor serves as a segue to concrete recommendations, presented as rules to be broken: "Don't use sound files" but "if you *do*" then list the size as well. The italics on "do" mimic emphasis in speech, further emphasizing the orality of the prose.

Unlike Krug, Flanders is explicit in why he uses humor in his writing. In his forward, he claims, "If you're one of the millions of visitors to the original WebPagesThatSuck.com site, you'll know humor played an important part in its success…People learn best when they're enjoying the process and humor is a great tool toward this end." [Flanders-PagesThatSuck p. xvii] Here, humor is sound pedagogy.

While such humor may seem out of place in written communication, the benefit of humor in education and entertainment is well-understood. Humor is known to defuse tension [64, 105], humorous anecdotes build solidarity by making experience shared [73], and referential or dirty

jokes constitute "understanding tests" where the teller reveals some knowledge or experience and watches the listener's response to test if they understand [87]. In business negotiations, humor carries social significance: who tells jokes and who decides when to laugh implies power structures [105]. Particularly on the web, ironic humor has been found to build collective identity [37, 46], which is created when "in-groups" are defined through the ridicule of an "out-group" [1]. [Flanders-PagesThatSuck] is a book about ridiculing an out-group—web designers who create the titular *Web Pages That Suck*—to teach readers to design better sites. Yet Flanders is also implicitly communicating his culture of web design, the shared humor, and experiences which define web designers.

5.2.2 Masculinity: Humor and Shared Identity. Appeals to shared culture and humor also alienate. While humor can be tailored towards any conference audience, putting it in writing requires making assumptions about the readers—which can backfire. A non-fluent English speaker may not understand the visual pun between Adobe Flash and the photo of someone flashing. Because Flanders's book is written for web designers, people who do not understand his jokes may feel excluded from the label of "web designer."

In a sidebar titled "Pornography: The Ultimate Web Content?" we see a fascinating example of how humor interacts with identity and reveals some of the author's assumptions about his readers:

> I realize pornography is a touchy subject (pardon the pun) for many people, but we need to look at it in a cool, rational manner because, like it or not, pornography is the kind of content people will crawl through sewers and beg to buy…Like it or not, pornography is the ultimate easy sell because it's something people will pay to see. They might not pay to read Michael Kinsley's *Slate* magazine, but they might pay to see him naked. Well, maybe that's a bad example. You know what I mean. [Flanders-PagesThatSuck p. 52]

In addition to implying that American political commentator Michael Kinsley is unattractive, Flanders implies that the "people" who use the Internet are those who will "crawl through sewers and beg to buy" pornography. By encouraging his reader to look at it using the masculine-coded language of "a cool, rational manner," he is placing his reader in the same group of people. The relationship between pornography, masculinity, and power is well-studied [28], and scholars have found the Internet maintains those power structures [47]. In particular, there is a popular assumption that the "default" Internet user is male [54, 79], a hypertext version of Laura Mulvey's concept of the male gaze in cinema [67]. While studies of harassment of women on the web typically focus on the rise of social media a decade later [58, 79], we see the ideological foundations for those problems reflected here. Flanders also writes as though he is talking: if he really thought Kinsley was a bad example, he would have removed it. This comment, instead, reflects the orality of the prose: one might imagine him adding "you know what I mean" in a talk to quiet down a laughing audience.

Seth Godin uses a different style of humor to define in-groups in [Godin-BigRedFez].

> Why are so many sites in financial trouble? Why is it almost impossible to get a new consumer web company funded? The answer is deceptively simple: Because the engineers are in charge…Face it, if you're like me, you don't really know how to build a website and integrate it with your backend SQL database. Heck, you don't even know what a backend SQL database is. But someone in your company does know what one is (or pretends she does) and so that person has a great deal of power…The original web designers wrote the early books, influenced the early articles, staffed the first web shops…They loved technical stuff and viewed marketing as a necessary evil, not

> the center of the net. All was fine, except when they were joined by the Hollywood-wannabes, the guys with the soul-patch beards and weird haircuts. These were the folks who wanted cool more than anything. [Godin-BigRedFez p. 12]

Godin, as a self-labeled "marketing guru," is using a different kind of humor for a different audience. He is discussing web design in a humorous manner by poking at stereotypes of Internet company executives with soul-patch beards and mocking the techno-babble of a "backend SQL database." His readers, unlike Krug or Flanders', are not nerdy web designers who love technical things or cool sites, they're business people on the web to make money. Despite the lone "she" in the text, these are all defined around masculinity, but it is a different masculinity, to use the language of Connell [21]. On the other side of the nerd/jock dichotomy, it is more in line with traditional views of American masculinity.

Not all of the books in our corpus are written in this humorous tone: several books (e.g., [Veen-ArtSci], [Nielsen-DesigningUsability], [Garrett-ElementsExperience] and [Shea-ZenCSS]) take themselves very seriously, and one might argue that they constitute separate genres. However, our interview participants reference serious and humorous best practice books together as direct alternatives to one another, and other books (e.g., [Siegel-KillerSites]) blur that boundary through the use of a casual, conversational tone without many jokes or gags. Humor, rather than an essential characteristic itself, is more indicative of the larger trend that best practice books emphasize the cultural credibility of their authors and try to hold their readers' attention.

In general, we see the same pair of themes when looking at humor that we saw with justification. Authors establish their legitimacy through masculine displays of nerd credibility and write in an oral style resembling a conference talk.

5.3 Dramatic Headings and Confident Claims

Hyperbolic section headings making bold claims are common in our corpus. These claims are often followed up with a more reasonable, if still less-than-justified, explanation in the text. This pattern relies on the author to establish authority and trust through experience and cultural credibility, thereby contributing to the confident, dramatic style in best-practice books.

5.3.1 "Everything You Know About the Web is Wrong." In the first section of [McGovern-ContentCritical], Gerry McGovern and Rob Norton make clear that their understanding of the web is quite different from the reader's.

> The Web is not the lost city of the geeks. It is not there so that the techies can take over the world. The Web is not "cutting edge" technology, but rather primitive technology...a place where people come to publish and find content.

McGovern and Norton shock their readers by assuming they come with a techno-futurist mindset (like that seen in [Nielsen-DesigningUsability] in Section 5.1) where the web is "revolutionary" in the sense of a nerd revolution against the traditional relationship between business and technology. The revolution narrative, where a "nerd" masculinity replaces the existing "jock" masculinity as the hegemonic form, is central to the cultural and historical moment, both through works of fiction like the 80's and 90's *Revenge of the Nerds* films [52, 55] and the rapid rise of Silicon Valley companies in the late 90's that eclipsed traditional businesses [24]. Dramatically rebuking that techno-futurism, McGovern, and Norton situate web design in publishing and web use as reading, putting web design squarely in the realm of established business practices.

5.3.2 "Digital Metaphor is the Enemy of Progress." Similarly, shocking claims are delivered with absolute confidence in [Godin-BigRedFez].

What if your car were built with little horse-and-buggy metaphors sprinkled through-
out the dashboard and pedals? The steering wheel could have little reins on it. The
gas pedal could go under your heel and you could jangle it, like spurs, whenever
you wanted to move faster. You can imagine what the exhaust pipe would look
like…*[ellipses in original]* [Godin-BigRedFez p. 39]

Instead of a more nuanced claim that metaphors are generally inadvisable or even that they
should be avoided, he dramatically calls them "the enemy of progress." This claim gets us to keep
reading, to find out what would make him say such a provocative thing so confidently. He does
not give any empirical evidence, but instead backs up his claim with toilet humor. The writing
style of authors like McGovern and Godin resembles the web writing trend of clickbait—the use of
sensational headlines and links to encourage web users to click—and tends to blur fact and opinion
as a result [14]. Godin's use of ellipses mimics a conference speaking style where his sentence trails
off as the audience laughs.

5.3.3 "Mystery Meat Navigation is the Spawn of Satan." [Flanders-SonPagesSuck] has a wide
array of shocking headers, including this one which introduces a section on Javascript rollover
navigation, which Flanders calls "Mystery Meat" navigation. Another heading is "Heroin Content
is the Best Content," which argues that sites succeed when they have content users want. Headings
like these are part of Flanders' broader gimmick to treat bad web design like a carnival spectacle,
something entertaining to gawk at. This gimmicky tone is ironic: he is deliberately imitating the
design style that he is critiquing. This design style, in which colors, blinking graphics, and pop-ups
are used to increase a site's "hit rate," is advocated in [Siegel-KillerSites].

The theme discussed in this section reinforces the masculine confidence and oral character of
these texts. Once authors have proven themselves credible and trustworthy, bold claims shock the
audience into paying attention like a stage magician announcing the next trick: *How will he defend
this claim?* There is a certain masculine bravado and showmanship inherent in making a dramatic
claim, and it helps to justify the less outrageous claims in the following section, since it primes the
audience to accept a more reasonable version in comparison.

5.4 Views of the Past and Future of Web Design

Best practice books often discuss the history of web design and make predictions for its future.
These discussions are employed as rhetorical devices to motivate the authors' design perspectives.
However, all historical writing contributes to the construction of historical narrative [7], so it is
important for historians to understand how the goals of best practice books frame the histories of
web design they present.

In [Siegel-KillerSites], David Siegel explains the development of web design in three generations:
"first generation" sites were plaintext, while "second generation" made use of visual elements like
icons and backgrounds.

A third-generation site is wrought by design, not technical competence. Third-
generation sites give visitors a complete experience, from entry to exit…Third-
generation sites form a complete experience—the more you explore, the more the en-
tire picture of the site comes together. *Third-generation design turns a site from a menu
into a meal.* [emphasis in original] [Siegel-KillerSites p. 29]

This framework effectively supports Siegel's argument that websites no longer limited by tech-
nology should be designed to provide better aesthetic experiences. Generations are defined from
that perspective: first generation sites are constrained by the limits of text, while second genera-
tion sites can freely use multimedia elements like images but are limited by other technical factors.

Siegel is the herald of a new generation without such limitations. By associating the past with the technology and the present with art, he implies that web design has progressed past the realm of engineering, echoing a dichotomy we discuss in Section 5.5. At the end of his book, he puts forward predictions for the future which continue this trend: more colors, sounds, and animations, and potentially existing only in virtual reality.

In [VanDuyne-PatternsPrinciples], Douglas Van Duyne, James Landay, and Jason Hong define generations according to "mantras:"

> The First Generation: The mantra was "build it, and they will come." Talented individuals and large crews alike built Websites…But, having built the site, they could say only that they had a Website. They could not say how their site was performing from the customer's perspective…The Second Generation: The mantra was "advertise that you sell it online, and they will come." Start-ups invested large amounts of capital into expensive ads to drive visitors to their e-commerce sites…The Third Generation: Today the focus has shifted to constructing powerful Websites that provide real value and deliver a positive customer experience. [VanDuyne-PatternsPrinciples p. 1]

Similarly to Siegel, Van Duyne, Landay, and Hong use historical generations which form progressions, implying that history itself supports their argument that design patterns can help sites provide more value to the business. As such, their generations are defined by the relationship between business strategy and the web. Notice also how the term "mantra" evokes the idea of a "tech guru" discussed in Section 5.1.

Our participants also overwhelmingly described their careers in terms of three-period structures. P6 divides his career into table-based layouts, Cascading Style Sheets (CSS), and responsive design. P9 points towards the introduction of technologies to periodize the history of web design: "So e-Commerce: you could buy things on the web, then mobile phones: you could look at websites on mobile phones. As a sort of slightly less important subsidiary of that, it would be the scrolling behavior come along from Facebook and social media sites…and then the final one will be more a tooling thing."

A periodization is a natural approach to historiography [7], and dividing time into three periods naturally allows history to fit into a beginning-middle-end story arc. These histories are more oral or folkloric than academic written history, and set up the author's perspective, rather than to document or understand the past. We do not mean that three-part historiography is inherently deficient to characterize the evolution of web design; rather, our intent is to critically examine how such approaches to historiography serve as rhetorical devices that authors then mobilize to legitimize their arguments.

5.5 Use of Dichotomies to Define Web Design

Finally, the books in our corpus define the relationships between concepts, perspectives, and people in stark, dichotomous terms. These dichotomies—often between artistic/design and technical/engineering—rhetorically build a shared identity between the author and their imagined audience, which often relates to gender (as did humor in Section 5.2.2). Furthermore, since we find similar dichotomies in our interview results, these modes of thought have been sustained in the identity of web design as a discipline. In this section, we unpack several of these dichotomies and use them as an entry-point into a historical narrative involving the relationship between aesthetics and usability in web design.

5.5.1 Two Views of Engineering. The most explicit dichotomy in our corpus comes from [Godin-BigRedFez].

There are two versions of what happens online. There's the engineer version, which is that smart people, with plenty of time, who know precisely what they want from their online surfing, are able to make a considered decision with access to all the data…Then there's the marketer version. This says that people are busy, ill informed, impatient, not very thoughtful, and eager to click on something right now. [Godin-BigRedFez p. 7]

This passage tells us that he expects his readers to be marketers, and by framing thought about web design in such stark terms, he makes it clear that he is a marketer as well, not an engineer. Like the use of humor discussed in Section 5.2, this passage is an example of using in-group/out-group thinking to build collective identity [1].

[Nielsen-DesigningUsability] presents a similar dichotomy, but from the engineering side:

There are essentially two basic approaches to design: the artistic ideal of expressing yourself and the engineering ideal of solving a problem for a customer. This book is firmly on the side of engineering. While I acknowledge that there is a need for art, fun, and a general good time on the web, I believe that the main goal of most web projects should be to make it easy for customers to perform useful tasks. [Nielsen-DesigningUsability p. 29]

Nielsen is making the same sort of distinction between two worldviews as Godin, but he characterizes the sides differently. While Godin paints engineering as disconnected from reality, Nielsen describes it in terms of solving problems and accomplishing tasks. Similarly, while Nielsen characterizes the non-engineering option as something lighter—"expressing yourself" and "a general good time" instead of "useful tasks"—Godin describes his alternative to engineering as a more realistic approach to design. Interestingly, both perspectives point towards their side as the worldview based on usability and efficiency: people who are busy and "eager to click on something right now" also likely want to "perform useful tasks."

Despite identifying different in-groups and out-groups, the authors share similar value systems which are ultimately rooted in masculinity. For Godin, the marketing perspective leverages usability through social skills and an understanding of people to avoid the hopelessly nerdy and emasculated engineering perspective. Similar to the passage we examined from Godin in Section 5.2, this framing links web design to nerds and jocks. For Nielsen, engineering and usability are posed as the serious masculine option whereas art is the lighter, more feminine option. This use of stark dichotomies is also a form of rhetoric historically characterized as masculine. In Farrell's theory of gendered modes of rhetoric, the "masculine mode" frames issues in terms of one side the speaker is for and another they are against, while the "feminine mode" avoids such stark oppositions [15, 34].

5.5.2 Programming vs. Design. Unlike the previous two dichotomies which are between worldviews, this example is a dichotomy between two kinds of people. Garrett argues in [Garrett-ElementsExperience p. 120] that the ideal program is one that never breaks, so programmers spend much of their time thinking about "edge cases"—users or situations which exhibit uncommon characteristics and need to be handled differently. Design, on the other hand, requires us to prioritize common situations. "An interface that gives a small number of extreme cases the same weight as the needs of the vast majority of users ends up ill-equipped to make either audience happy," which, in Garrett's eyes, is why programmers are often poor designers. This dichotomy came up in our interview with P4, although instead of thinking of programming and design as incompatible, he views them as distinct sides of his job: the factors which affect his coding practices do not change his designs.

P7 brings up the distinction between coders and designers when discussing CSS. She believes people write bad CSS when they do not understand both sides. Since CSS is not a programming

language, programmers don't study it seriously: "There is a JavaScript first and framework approach where…they confuse a lot of components. I see it all over the place that CSS is too complicated." On the other hand, designers are intimidated by the technical nature of the cascade: "People who are not inherently coders and more visual come to this and they're just like, 'Screw this. I don't know where the hell the problem is. I'm just putting bang important or I'm doing an inline up in the specificity, I win, end of story.' " Her implication is that CSS has had difficulty achieving its goal because of its liminal status between design and programming.

P5 describes Krug's use of an essentialist dichotomy between engineers and designers, and the implications that that dichotomy has had on the field: "So Steve Krug, I saw him speak once and he had this great slide where he was explaining what makes people happy in their brains?…[For] graphic designers, it's pretty layouts and pretty colors…And then he had this wonderful slide, which was what makes engineers happy. And it was like all this complexity…If you are really phenomenal graphic designer, code is really hard for you to work with. And if you are really great code person graphic design is a challenge. I mean this observing 20 years of students working in this field." She goes on to explain that this distinction has led to a divide in web design tooling. "So we have tools where we're splitting the middle. We have tools that are getting easier and easier and easier to use. …interfaces where people can build websites with no knowledge of code whatsoever…and on the other end, if you want to get into the professional side of this, it is unbelievable the barriers to entry that have been put up."

P5 gets to the heart of how these books have shaped web design. She was influenced by Krug's dichotomy between design and programming and observes it in her students. As web design has grown more specialized, the same dichotomy reinforces itself through a split in technology. Definitions of web design based in dichotomies between art and science which may have been used for rhetorical reasons become part of the reality of the discipline, shaping design tools and processes.

This dichotomy between programmers and designers has a quite different purpose from the dichotomy between engineers and marketers. Instead of being used to build collective identity, it is used as a guide to relating to other web designers. Implicitly, this framework specifies two ways of being a web designer, and encourages us to choose one side or the other, rather than seek out another mode of thinking which is useful for both programming and visual design. While more subtle, such dichotomies can lead to a similar kind of "fixed mindset" as Veen's sequence of computers discussed in Section 5.1 [68].

Dichotomies between the arts and sciences are accompanied by gender stereotypes. There are associations between science, programming, thinking, and masculinity which are opposed to associations between art, design, feeling, and femininity. The relationship between the thinking/feeling dichotomy and gender is well-understood in sociology [49, 101] and psychology [78]. However, the history of computing shows that these associations are not essential: programming can both be seen as more an art than a science and can be done primarily by women, and the two are not linked [32]. In the words of Turkle, "the computer has no gender bias. But the computer culture is not equally neutral" [101].

5.5.3 Jakob Nielsen vs. the Artists. In spite of these possibilities, though, web designers during this period grouped best practice books themselves into two camps along the art/technology dichotomy. One camp emerged following David Siegel and the ideals of [Siegel-KillerSites], which holds that websites should be designed as aesthetic experiences, valuable in-and-of-themselves. The other camp emerged around Jakob Nielsen and his response: that websites should be designed as tools, and made as usable and efficient as possible. Siegel and Nielsen were understood as the representatives of opposite sides in a debate, both an abstract, conceptual debate over the role of design on the web and a literal one held at the 1998 ACM CHI Conference on

Human-Factors in Computing [40]. The sides were summarized by Curt Cloninger (author of [Cloninger-FreshStyles]) in a blog post on Jeffrey Zeldman's webzine A List Apart, "Usability experts are from Mars, graphic designers are from Venus" (2000) [16].

> There is an unarticulated war currently raging among those who make web-sites…between usability experts and graphic designers. In the usability corner, wear-ing the blue and purple underlined trunks, weighing in at just under 25 K per gig…J-a-a-a-a-kob Nie-e-e-e-lsen, usability guru extraordinaire [sic], with over 16 usability patents and several "lists of 10'—do's, don't's, thou shalt's, and thou shalt not's. And in the graphic design corner, wearing the greyscale trunks, weighing in at 500 K per site (that's dollars, not bytes)…Kioken(oken-oken-oken), firing clients left and right, and wielding Flash as if the plug-in itself were built into Joe Newbie's genetic makeup.

This post, which has a considerably different tone from the books in our study, makes several cultural references. "Blue and purple underlined trunks" references Nielsen's well-known claim that sites should preserve the default link colors on the web. Kioken refers to the web design company founded by Peter Kang and Gene Na in 1995 which specialized in web design that was, in the words of a 1997 New York Times article, "smooth, sleek, unusual, unlike most anything else on the web" [69]. After some facetious description of his fictional boxing match, Cloninger continues:

> For better or worse, the divide between these two camps existed long before "new media," and will continue to exist long after the web has become as commonplace as indoor plumbing…With that in mind, allow me to glibly and over-simplistically delineate the situation: Usability/Information Architecture == the masculine == the left side of the brain == doing == math/science == the rational == logical action == the articulatable [sic] == Mars. Graphic Design == the feminine == the right side of the brain == being == art == the emotional == intuitive action == the inarticulatable [sic] == Venus.

The title of this post, and the resulting argument, is a reference to the 1992 self-help book *Men are from Mars, Women are from Venus* by John Gray which asserts that there are essential differ-ences between men and women, and understanding such differences can improve our relation-ships. Cloninger is making the point that the divide between usability experts and designers is as deep and essential as the differences Gray identifies. However, it is unclear whether Cloninger is making this claim seriously, or using the comparison to a self-help book to ridicule Nielsen and his critics. Of course, Cloninger is a partisan in the usability debate as well. In his books ([Cloninger-FreshStyles] and [Cloninger-FresherStyles]), he argues that usability and aesthetics are fundamentally intertwined, and advocates against Nielsen's "un-design."

The same controversy appears in [Flanders-SonPagesSuck] as well in a setting titled, "Jakob Nielsen vs. the Artists."

> If you want to be accepted as a cool Web designer and get invited to all the trendy par-ties, you need to publicly decry usability and its adherents—especially Jakob Nielsen—and talk about community, and the need for postmodern, deconstructionist, techno style (blah, blah, blah) in Web design. Otherwise, you'll be branded—with a Scarlet "U"—as a person who feels a site should be merely usable and functional, at the ex-pense of other considerations, like visual interest. [Flanders-SonPagesSuck p. 31]

This passage reveals the culture of professional web design as Flanders saw it in 2002. Con-cepts from critical theory, deconstruction, and postmodernism, are trendy while an emphasis on

usability is ostracized. Flanders' scarlet "U" references Nathaniel Hawthorne's *The Scarlet Letter*, where the protagonist is ostracized for adultery. It also echoes the same victim complex inherent in nerd masculinity: the "cool" artists, like the jocks of conventional business culture, are bullying the uncool nerdy usability advocates [55]. [Flanders-SonPagesSuck] continues,

> And both sides are wrong—but both sides are right, too. The Web is like a flower in a Wal-Mart parking lot—moments of beauty surrounded by ugliness and crass commercialism. It's that crass commercialism that Jakob and the Artists forget, or at least under-emphasize. If you're trying to sell a product, then it's equally acceptable to conform to the principles of usability or break those rules—as long as what you do works for your intended audience. [Flanders-SonPagesSuck p. 32]

Flanders' argument places usability and aesthetics as equivalent alternatives which can both be used in service of a commercial goal. This interpretation is particularly interesting for two reasons. First, it aestheticizes usability—usability is no longer a goal in itself, it is merely a style, which can be adopted or discarded based on sales data. Second, it acknowledges the reality that web design as these books present it is fundamentally in service to capital, a tool for attracting dot-com investors and, if successful, selling goods and services to consumers.

This debate was also analyzed at the time by the design historian Ida Engholm [30]. She identifies Siegel, Nielsen, and Zeldman as "lighthouses" in the debate over the role that style should play in web design. In Engholm's analysis, Siegel and Nielsen represent polar opposite positions for and against graphic-aesthetic design on the web, respectively, while Zeldman takes a position in the middle which she labels as the "Swiss Style." Like the earlier graphic design school of the same name, this approach is a design-conscious take on functionalism, which paints usability and aesthetics as two sides of the same coin.

6 DISCUSSION

We examined 18 books, which have effectively communicated web design principles to the 11 practitioners that we interviewed, and we study the rhetoric of those books. Our corpus exhibits five rhetorical practices which appear repeatedly: appeals to professional and "nerd" credibility, humor and cultural references, dramatic and confident claims, especially in section headings, historical sketches to motivate their perspective, and dichotomies to define web design in relation to other disciplines. These trends follow the unifying theme of speech-like techno-masculinity. In this section, we will explore the elements of that theme in more detail, then develop three concrete takeaways for HCI research.

First, we notice that certain elements of this style seem unusual in the context of written rhetoric, but make perfect sense in oral rhetoric: use of specific elements like ellipses, italics for emphasis, and remarks like "you know what I mean" after delivering the punchline for a joke, as well as the mechanics behind the books' arguments. Authors justify their perspectives by leveraging history to motivate their claims and by characterizing themselves as trustworthy and culturally credible. They use humor and bold claims to hold the attention of an audience. They frame complex disciplinary differences in terms of simple dichotomies. These characteristics resemble those of written rhetoric in secondary oral culture [75].

Such an interpretation is highly consistent with the context in which books on web design principles were published. Authors gained fame at least in part through conference talks: one of our participants referenced seeing Steve Krug speak and another mentioned a literal debate between authors in our corpus at the 1998 ACM CHI Conference on Human-Factors in Computing [40]. Publishing books based on conference talks allows authors to monetize that popularity while building their personal brand and consulting career. Additionally, mimicking the rhetoric of

those talks gives readers the experience they expect and further reinforces the personal speaking style of the author.

Second, we see a particular kind of confident nerd masculinity in the rhetorical style. Authors write bold claims with confidence. When they justify their authority or make jokes, authors emphasize factors like their knowledge of popular culture. They assume that their audience consists of nerdy men who expect the web to bring a revolution against traditional business practices and traditional masculine ideals alike. When making dichotomies between disciplines, they frame the discipline to which they belong as the more "masculine" one, which is usually engineering. Such a framing for web design both legitimizes it as a serious, scientific discipline and necessarily constrains the modes of thought which it considers legitimate: in the system of web design put forward in most books in our corpus, thinking like an engineer or marketer is a more legitimate basis for design decisions than thinking like an artist.

Strong displays of gender in rhetoric also make sense when considered in the context of the dot-com era culture. Computer science, which grew out of engineering, inherited its "occupational masculinity" and the accompanying value systems [107]. The culture of dot-com era Silicon Valley similarly exhibits nerd masculinity and acts out the concept of revolution; it is the first place and time where nerdy startups out-compete traditional businesses, reversing the stereotypical masculine hierarchy of American high school culture [24, 58]. Unfortunately, this revolution does not fundamentally challenge gender hierarchies, as it is still hegemonic masculinity in a different guise [21].

The books in our corpus make design recommendations that appeal to a core value of either aesthetic quality or usability, which are viewed by authors as fundamentally opposed. In the "Jakob Nielsen vs. the Artists" framing of the discipline, creating beautiful design necessitates ignoring usability goals while creating efficient, usable software means neglecting aesthetics. Implicit in this dichotomy is the rarely-spoken assumption that both usability and aesthetics are tools, which serve to attract attention to a website, either from investors or consumers. The value systems that these books put forward for web design are steeped in capitalism and the fast-paced, competitive environment of the dot-com boom.

Values of usability and aesthetic quality do not have to exist in service to a capitalistic goal. The inherent replicability of websites makes them difficult to treat as commodities directly, and the early web saw the existence of more playful uses of web technology like Net Art [19]. They also do not have to be opposed. We can imagine an alternative reality in which web designers came to understand their discipline through the rejection of such reductive dichotomies. For instance, art communities labeled by Popper as "Technoscience art" have defined their work as a synthesis of art and technology [81]. Much like art and science are not essentially opposed, people can identify outside of the gender binary [84], and moving beyond essentialist concepts of gender has been identified as a goal for feminist HCI [85, 95]. In our imagined alternate reality for web design, we find inspiration in this feminist logic to conceptualize aesthetics and usability differently.

Our analysis comes with a variety of caveats. We have focused on web design trends in the English-speaking world, since all the books we studied were composed in English. The definition of the best practice book genre is, like any genre label, constructed and somewhat subjective, and some authors in our corpus may not consider it an accurate label for their work. Furthermore, the trends we observe are not inherent to the genre, or even found in every book within our corpus. Questions of influence and discursive construction are difficult to answer with any certainty: books give us an incomplete snapshot of a social world, which existed at workplaces, schools, conferences, and online spaces and may only reflect existing ideas and attitudes without meaningfully contributing to them. However, printing words and binding them into physical books does make ideas real, physical, permanent, and far-reaching in a way that oral and online discourse does not. The sheer number of times such texts have been cited is evidence of that permanence.

As contemporary HCI researchers, we are also part of the future of design and would like to use the history surrounding web design books to reflect on how future authors might learn from these examples of HCI communication. We are not suggesting that the authors of historical books caused harm against web design, or even that there is a problem to be fixed; the books in our corpus were highly effective at both legitimizing web design and communicating HCI principles to a new audience. These books are also distinctly historical, steeped in the culture of the dot-com boom. Our participants made clear that they would not recommend these books to new web designers today (and free online resources now dominate). While the HCI community can continue to exert influence on designers, we cannot "restart" web design or reset influences, which have already become entrenched by publishing a new generation of books, for example. That said, we identify three recommendations for the HCI community.

First, we recommend that scholars avoid citing and assigning web design books from this era uncritically as authoritative sources. Rather than abandon such texts to archival status, however, we recommend discussing the rhetoric of these books when we use them. For example, instead of stating that "links on the web should be no more than two to four words long" and citing [Nielsen-DesigningUsability], we should consider Nielsen's historical context: why he chose rhetorically to make this recommendation, what sorts of practices he was trying to discourage, and whether a recommendation is a scientific fact or an expert opinion. This is even more crucial since Nielsen's work remains hugely influential in foundational HCI textbooks [91]. By thinking critically about received wisdom in design, we avoid recreating hegemonic modes of thought, encourage innovation, and allow design standards to shift naturally over time instead of becoming dogmatic.

Second, it is likely that as technology changes, paradigms will shift and new design disciplines will develop both on the Internet and beyond. Designer researcher-practitioners who explore those fields will certainly make recommendations to one another via writing and shape their emerging disciplines as a result. We believe further research is needed on how best to do that writing. Just as writing about design is, in a way, designed, perhaps we can construct "best practices for best practice writing" and recommend rhetorical strategies to produce design recommendations, which are themselves usable and aesthetically pleasing without being unintentionally exclusionary. Since these books are designed teaching tools as much as they are written texts, we can apply design principles to their writing. Future research investigating the particular needs of designers as users of design books would be a natural next step.

Third, our findings also suggest that publishers, both traditional and web-based, should encourage a diversity of voices to write about design practices, to avoid hearing only from confident white American men on tech conference speaking circuits. It is no coincidence that all books in our corpus, with the exception of two co-authored by women, were written solely by men. Future research in HCI communication should identify strategies for soliciting, publishing, and publicizing the work of design researcher-practitioners who hold perspectives outside the mainstream to better present the plurality of effective design methods and principles.

7   CONCLUSION

In this article, we have introduced the study of web design books as an approach for understanding how the relationship between design research and practice has played out historically. We examined the rhetorical strategies used by the authors of several historical web design books and found that they exhibited a characteristic speech-like techno-masculinity, steeped in the culture of Silicon Valley and the dot-com boom. We argued that this rhetoric has shaped the disciplinary identity of web design, and explored avenues through which it continues to influence web designers and their tools and processes today. Based on our analysis, we suggest several avenues for HCI to approach these books differently in our teaching and research going forward. Centrally,

we encourage researcher-practitioners to think critically about received wisdom in design and approach design recommendations in their historical and cultural context. We also encourage further design research to explore ways to improve the writing of future resources for designers.

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