Stories of the Smartphone in Everyday Discourse: Conflict, Tension & Instability

Ellie Harmon & Melissa Mazmanian
Department of Informatics
University of California, Irvine
{ellie.harmon, m.mazmanian}@uci.edu

ABSTRACT

As the smartphone proliferates in American society, so too do stories about its value and impact. In this paper we draw on advertisements and news articles to analyze cultural discourse about the smartphone. We highlight two common tropes: one calling for increased technological *integration*, the other urging individuals to *dis-integrate* the smartphone from daily life. We examine the idealized subject positions of these two stories and show how both simplistic tropes call on the same overarching values to compel individuals to take opposing actions. We then reflect on the conflicts individuals experience in trying to align and account for their actions in relation to multiple contradictory narratives. Finally, we call for CHI researchers to tell and provoke more complicated stories of technologies and their relationships with values in conversations, publications, and future designs.

Author Keywords

smartphones; cultural discourse; values and design

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

INTRODUCTION

Several scholars have pointed to the recent and rapid diffusion of mobile information and communication technologies (ICTs) in American society as one marker of the arrival of a kind of ubiquitous computing, e.g. [12, 19]. It was only a decade ago that RIM combined its already popular email pager with the cellular phone to produce the first iconic BlackBerry smartphone. Today, in a market saturated with a variety of smartphones, surveys highlight their increasing prevalence. In November of 2011, Pew Research found that "35% of American Adults Own a Smartphone" [52]. By March of 2012, that number had jumped to "Nearly Half" [53]. As smartphones become increasingly pervasive, we find ourselves at a key moment for both reflecting on this contemporary socio-technical shift, and examining the narratives of

smartphone use as they are formed. What does the everydayness of the smartphone promise? How is the smartphone user configured by these promises? What does the everydayness of the smartphone seem to threaten? How is the smartphone user re-configured in light of these threats?

Theorists in a variety of fields have noted the importance of media in shaping experience. Beck, Giddens, and Lash use the term "reflexive modernity" to describe the recursive relationship between everyday life and the circulation of continually shifting media stories that influence how individuals understand their intimate selves [9]. Kathleen Stewart, in her exploration of "ordinary affects," writes evocatively about the "glossy images" of *Glamour*, *House & Garden*, and *Esquire* that are always already a part of everyday life, not so much as directives but as intimate promises which verge on experience in their very perception [57]. In ongoing fieldwork with American professionals, informants often give accounts of their smartphone experiences in a language of "presence," "absence," "addiction," or "detox" that can sound lifted straight from the *New York Times*. Sometimes, confirming our suspicions, informants even offer up a citation. As researchers and designers interested in how people adopt, appropriate and experience mobile ICTs, it is critical to include these cultural stories themselves in our analyses. Inspired by recent calls for CHI researchers to employ methods and theories from cultural studies and the humanities [5, 12, 28], we present here a discourse analysis focusing on popular American conceptions of the smartphone.

Taking advertisements and news articles as our primary evidence, we unpack two tropes about the smartphone in everyday life, and highlight the subject positions and values that these stories promote. The first story compels otherwise 'out of touch luddites' to *integrate* the smartphone in daily life, promising new forms of mobility and connectivity that transform users into 'multi-task masters.' In contrast, the second story figures the smartphone user as a 'distracted addict' and calls for individuals to *dis-integrate*[1] the smartphone in order to become 'authentic humans'. Motivated by a set of overarching values, each story suggests a single 'ideal state' of either use or non-use of the smartphone. Despite the contraindications of the two stories, when taken together, they help us to see the smartphone as an object that is multiply constituted,

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[1] These terms come from a fieldwork participant who remarked that for years people have been trying to figure out how to 'integrate' mobile ICTs into their lives, but, now, seemingly too successful at that, people are trying to figure out how to 'dis-integrate' them.

and multiply experienced. Considering these narratives in the context of ethnographic fieldwork engagements, we highlight three areas of conflict, tension, and instability relevant to the relationships among values, technologies, and everyday life.

First, we find that both tropes are overly-simplistic and fail to recognize the sociality of the smartphone. Both stories promote unrealistic expectations of individual and technological agency by ignoring the conflicts inherent in 'choices' to connect or disconnect. Second, despite the impossible assumptions embedded in the two tropes, we find that these stories are powerful influences in everyday life. Our fieldwork informants experience their subjectivity as conflicted and unstable, bouncing between ideal states in the micro-moments of daily life. Their experience of instability is in part related to ongoing attempts to align and relate their own lives with the contradictory and idealized subject positions made available in the two tropes of integration and dis-integration. Finally, in making both stories explicit, we show how they are motivated by appeals to values of autonomy & control, togetherness & community, and productivity & effectiveness. We find that each story provides individuals with a directive about how to use (or not use) the smartphone to enact these core values. However, we also find that assumptions of what each value means and how it should be experienced and enacted vary dramatically. Thus, the practices suggested by each narrative for achieving the 'same' value are mutually exclusive.

Members of the CHI community have many opportunities to tell and provoke new stories through publications, conversations, and technological designs. We argue that as researchers and designers, we should work towards complicating simple tropes of good and bad, individualized technologies, and single avenues for achieving core values. In reporting our research, we should be steadfast in refusing to sweep under the rug the messy cultural, social, economic, political, and institutional pressures that shape use and experience beyond the moment of a user's physical interaction with a technological object. In light of our analysis, we call for an attention to nuance in the ways that we understand and articulate values in our narratives and designs. Neither values nor subjectivities are stable – the same user can experience autonomy through engaging with their smart phone or casting it aside, and this experience might shift in a matter of minutes.

RELATED WORK
HCI has a longstanding interest in the ways that values might be embedded in or propagated by the design of technology [2, 13, 15, 23, 31, 32]. In recent years, researchers in the CHI community and elsewhere have raised questions about the relationships between contemporary ICTs and values such as autonomy, busyness, constant connectivity, multi-tasking, productivity, and speed [33, 34, 36, 37, 39, 38, 50, 61, 63]. Researchers studying ICTs within the context of everyday life have often pointed to the interplay between everyday practices, values, and broader cultural dynamics such as social expectations, class, or norms [3, 42, 58, 62]. As Grinter and Palen conclude in their 2002 study of Instant Messaging, "Understanding IM use among teenagers. . . requires examining it as a feature of their culture" [24].

Phoebe Sengers has argued that values, everyday experience, and technology design are often entangled in implicit ways [50]. Her reflection on personal experience in an unfamiliar environment demonstrates one way to make the "cultural baggage" of contemporary ICTs explicit via a kind of defamiliarization, see also [10]. In the present work, we attempt to make explicit the 'cultural baggage of the smartphone.' Fieldwork-based studies provide one perspective on cultural discourse as it is practiced. The present work enriches these understandings by approaching discourse through an analysis of popular media artifacts.

Popular stories matter for individual experience. A recent study combining qualitative and quantitative methods, found that email served as such a strong cultural *symbol* of overload, that it "distracted people from recognizing other [statistically significant] sources of overload in their lives" [8]. Smartphones, too, are powerful cultural symbols in contemporary America. In order to deepen our understanding of these devices and their multiple influences in daily life, we need to first make these stories explicit. Doing so allows us to examine the linkages between the values to which mobile ICTs are attuned and the anxieties that they simultaneously engender.

Our work is inspired by several calls for the incorporation of critical and cultural studies methods and theories in the practice of HCI research, [5, 6, 12, 28]. As Shaowen Bardzell has argued, the increasing ubiquity of "digital interactions" that "mediate people's relationships with friends and loved ones, with society, and with culture itself" demand an engagement with "the increasing moral and intellectual complexity of our professional activities." [6, p. 1301]. Recognizing the importance of discourse in shaping sense-making, cognition, and communication with others [7, 26, 56], feminist social scientists often find discourse analysis to be one important research tool in examining the stories that animate technological objects with promises and threats, e.g. [25].

HCI researchers have used discourse analysis to study user-generated content [59] and to reflect on the state of the field [18, 29]. Most similar to our work are studies of how research texts and practices configure certain kinds of 'users' [17, 64]. We build on such analyses by looking at advertisements and news articles to investigate how popular discourses configure subject positions for the 'user' (and the 'non-user'). This shift to examining popular culture artifacts is influenced by cultural studies scholars. For example, Lynn Spigel draws on advertisements, magazines, and architectural plans in her analysis of the 'smart home' to explore the development of "posthuman domesticity"–a practical and moral way of living [54]. Analyzing artifacts from popular culture highlights the normative value positions that frame appropriate and inappropriate ways to be smartphone users and non-users.

METHOD
Following Foucault, we understand 'discourse' to include the practices, histories, and broad networks of association that inform how texts and images are approached and understood [22]. Building on more recent Feminist STS scholarship, we approach our evidence as a kind of "sedimented practice"– things that are "part of the material configuration of the world

in its intra-active becoming" [4, p. 207]. Advertisements and news articles matter not simply for the sake of selling smartphones or subscriptions. In addition to creating desire, they instruct individuals on how to use a product both practically and morally [21]. These stories matter for users' experiences and by investigating them we shed light on the practices and histories that these stories influence and are influenced by.

Our interest in the interplay of cultural discourse and user experience, led us to focus our analysis on subject positions. Within a discourse, subject positions are the figures or characters with which a reader identifies or strives to be. Each position subjects its occupant to a certain set of values, knowledges, and possibilities for action and experience. Within each of two tropes, we find two subject positions–one of the user and one of the non-user. Thus, across both stories we identify four distinct subject positions: the 'out of touch luddite,' 'multi-task master,' 'distracted addict,' and 'authentic human.' We unpack these subject positions through an analysis of how the smartphone is or is not a part of that subject position, and how certain values are associated with the relationship between the individual and the device.

Data Collection & Analysis
The research presented here is part of an ongoing multi-year, multi-sited ethnographic study [35] of the smartphone. One of the authors has been conducting ethnographic fieldwork about mobile technologies with a variety of corporate professionals for 10 years. Both authors are conducting ongoing fieldwork on the use of smartphones with workers in the hospitality industry and families in their personal spaces. Previous ethnographic data has been analyzed through grounded theory building. Due to space constraints and because the ethnographic data is not central to this paper, we will not elaborate on these methods here. We invite interested readers to review our other publications [38, 39]. We mention our fieldwork because we draw lightly on the data in the discussion to re-contextualize the stories that we find in the media within actual lived experience.

Furthermore, in choosing media sources, we have privileged those targeted to the demographic of our fieldwork participants. While many of the stories we highlight seem to appeal to a fictive 'everyperson,' they are targeted to a certain imagined consumer, and it is worth noting up front that other media and stories might likely dominate other socio-cultural contexts. For this project, we are interested in the stories which matter in the day to day lives of our current fieldwork participants: middle-class American working professionals.

Our analysis draws on a collection of over 100 unique print advertisements, primarily sourced from *TIME* magazine. Researchers photographed advertisements for smartphones and other related devices (e.g. GPS units, non-smart phones, mp3 players) from all 52+ issues of *TIME* Magazine for the years 2002, 2005, 2007 and 2010[2]. We supplemented this compre-

hensive collection with advertisements for a subset of issues of *TIME*, as well as *Wired*, and *Forbes* spanning all of the years from 2000-2010. In addition to print advertisements, we draw on a set of television commercials and news articles. The second author has archived over 50 articles from popular news sources since 2004. Researchers have archived over 20 television commercials from the last 3 years.

Analysis began with an in-depth textual analysis of a subset of approximately 25 advertisements. The first author used memo-ing and mapping techniques designed specifically for cultural texts [14, 47] alongside adaptations of other qualitative data analysis strategies [1, 44]. This suite of techniques provided a variety of rich perspectives on the data and allowed us to gain insight into the tensions and promises made–both explicitly and implicitly–about the relationship between users and mobile technologies. On completion of the in-depth analysis, the first author wrote memos outlining the key narratives found in the advertisements. Both authors interrogated these memos and compared initial findings with the large set of print advertisements. We then reviewed the collection of news articles asking ourselves three questions: What is considered 'news?'; what cultural narratives is this article in conversation with?; and what are the fears and desires that this article is responding to or intensifying? We viewed the television ads as a point of triangulation for validating the cultural importance of the themes found in the print data.

SMARTPHONE STORIES
In the analysis that follows, we detail two tropes pervasive in our data–a story of smartphone *integration* and a story of smartphone *dis-integration*. Each of these stories draws into relief two subject positions and narrates a particular trajectory for individuals to move from one position to another. The story of *integration* evokes the figure of the 'multi-task master' and the 'out of touch luddite,' compelling individuals to adopt the smartphone as a tool of efficiency and enhancement. The story of *dis-integration* conversely figures the user as a 'distracted addict' and the non-user as an 'authentic human,' compelling individuals to detox through disconnection. Each story depicts an 'ideal' relation to the smartphone, and aligns with a core set of values; but each story espouses a different set of practices for enacting those values.

We did find some skewing of stories to sources. The news media foregrounds dis-integration more often than advertisers who tend to sell smartphones with an integration story. However, we also found examples of both stories across all media sources which should be evident in the discussion. Before examining the linkages between the two stories, we first make each story explicit by drawing on key exemplars from our evidence. In so doing, we pay particular attention to subject positions, values, and espoused practices.

Integration
A series of recent BestBuy television commercials feature Foursquare co-founder Dennis Crowley describing the everyday integration of the smartphone in his life[3]:

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[2]Years were chosen strategically: 2002 marks the first BlackBerry smartphone; 2007, the first iPhone; data was collected in 2010. 2005 is an intermediary year between 2002 and 2007. Due to significant duplication across sources, a comprehensive collection was only pursued from *TIME* magazine.

[3]At time of press, viewable at `http://youtu.be/8TkRvFG0TpM`

Foursquare makes apps for mobile phones that help you connect with your friends to make the real world easier to use. My smartphone is the one thing that I never leave my house without.

Crowley's smartphone isn't a tool for accomplishing a particular task, it *makes the world easier to use*. The story of integration is not just about the features and uses of the device; it is about a new way of living wherein the smartphone is ordinary, necessary, and integral. As the one and only thing a person can't leave home without, the smartphone is transformative of lifestyles, practices, and the self.

In the story of integration, the non-user of the smartphone is portrayed as an *out of touch luddite*. This individual is in part "out of touch" in the sense that he or she is behind the times. For example, a 2002 AT&T advertisement promoted "*the future* of business relationships" in terms of keeping up with *already established practices*: "when you've got the wireless program that 70% of the Fortune 500 agree on, that's the business side of mLife" [4]. The smartphone non-user is also out of the loop in the sense that he or she is unable to stay up to date with the latest information or keep in touch while mobile.

In contrast, the *multi-task master* builds successful relationships through the awareness and responsiveness that the smartphone offers. The smartphone's capacities for mobile multi-tasking allow freedom from the confines of any one location (e.g. home or office), and promise to give the smartphone user increased autonomy and control–putting people and information at one's fingertips. By integrating the smartphone in everyday life, the individual can be more productive and effective, often as a worker, but also as a parent or friend.

In framing the contrast between the "out of touch luddite" and the "multi-task master," the trope of integration engages with a set of three overarching values: autonomy & control, relationships & togetherness, and productivity & effectiveness [5].

Autonomy & Control
A 2002 AT&T advertisement for its "mLife for Business" wireless program centers on the integration of "Smart Relationships" and "Smart Technology" [6]. Spanning two pages, the left half is devoted almost entirely to text, describing how new "wireless handheld device[s]" are impacting the lives of business men. A vignette about Jeff Bradley, AT&T's Vice President of "mobile professional solutions," illustrates promises of connectivity, communication, and multi-tasking:

Recently, Bradley was in a day-long meeting when he realized he lacked some critical information. Before his turn at the podium, he used a wireless handheld device to retrieve the data and to email his assistant instructions to deliver some accompanying documents.

In this story, the smartphone offers its user new "smart" techniques of orchestration and control. In makes new kinds of

in-the-moment communication possible, it promises to put not only information, but also people at one's beck and call.

Depicting an empty bike and pedestrian bridge with skyscrapers in the background, the first page of a 2007 three page spread for Windows Mobile reads, "Ladies and gentlemen, Windows has left the building" [7]. On the second page, people are in the lanes, blurred as if they're actively moving. A smartphone replaces the text in the center of the page, its screen displaying the Windows Mobile logo. On the third page, a set of four floating screens encircle the device: an open email message; the msnbc website; the programs home screen; and a Word Mobile document. In other ads, these screens feature family photos, contact lists, and PowerPoint presentations [8]. These various screens capture a different aspects of the device's functionality, and different aspects of the imagined user's life. Always in the center of the page, the device appears to be the center of all interaction; the world hangs in orbit around the user via the devices enhancement of one's capabilities: multi-tasking across space and the ability to instantly reach out and connect with all aspects of life.

An evocative series of 2005 T-Mobile advertisements also promise to free smartphone owners from the confines of buildings [9]. Each ad carries the tagline "OUT. Brought to you by T-Mobile" and depicts in the top half of the page, an empty workplace exit, such as, the stairs of an office building or a subway elevator. The bottom half of the page depicts an individual engaged in some form of outdoor recreation, such as, skiing down powdery snow slopes, or swimming in aqua waters. In these images, the mobility and multi-functionality of the smartphone promise escape from the drudgery of all day meetings and monotonous tasks that take place in skyscrapers full of cubicles. Smartphone users are promised more flexibility and autonomy in choosing where to get their business done, and how to spend their day. Smartphones integrate business tasks with leisure places. In the words of Windows Mobile, they let users do "so much more."

In this story of integration, autonomy & control is experienced through being flexible and "in the know." The idealized 'multi-task master' controls life thorough a complex orchestration of incoming missives and information. Such individuals have the freedom and control to interact with this barrage where and when they like; they are liberated by mobility and information; they are in control of both those around them and those trying to reach them via the device.

Togetherness & Community
A recent series of AT&T commercials highlight the importance of speed, awareness, and responsiveness for enacting values of togetherness and community [10]. Taking place in an office setting, two workers chat about the speed of AT&T's network while holding their smartphones. A colleague walks by to tell them about a co-worker's engagement, but, not only

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[4] Emphasis added. *Wired*, October 2002

[5] There are more values at stake than simply these three (e.g. care, self-indulgence, escape, dedication, expression). However, our research suggests that these three values are robust and referenced repeatedly. While we present different examples to support each broad category, we do so to enable analytic clarity. In truth, we find that multiple value-laden promises are implied within each text.

[6] *Wired*, October 2002

[7] *TIME*, October 29, 2007.

[8] *TIME*, November 12, December 10, and December 31, 2007.

[9] *TIME*, February 18, April 18, and June 13, 2005. *Wired*, February, March, April and June 2005

[10] At time of press, one such commercial viewable at, `http://youtu.be/_4OcKGklrXk`

do they already know, they've already sent the newly engaged friend celebratory flowers. Portrayed against a backdrop of anxiety, those without AT&T's network appear to be both left out, and bad friends. They are too late with the congratulations; they seem to not really care.

In this story, togetherness & community is enacted and experienced through availability and responsiveness. Regardless of location–work, home, vacation, car–a good colleague is always accessible to co-workers and clients; a good parent is just a quick text away; a good friend is always aware of the latest Facebook update.

Productivity & Effectiveness
A 2002 AT&T advertisement promises that the new "voice enabled BlackBerry 5810" will transform one into a "multitask master"[11]. Depicting a man in a suit walking on a cobbled street, head bowed over his smartphone, the ad reads, "now you can walk the walk, talk the talk, and email the email." Augmenting the individual's capabilities, the smartphone is figured as enhancing effectiveness and enabling mobility (is he in Europe? for work or pleasure?) without sacrificing productivity.

A 2010 Verizon commercial for the Droid Bionic evocatively portrays smartphone integration as a kind of productivity-boosting human-cyborg transformation[12]. In the commercial, a man picks up his Droid in a business meeting to compose an email on its new "intuitive" keyboard. As he types, he literally becomes a robot. The conversion starts at his fingertips and moves up his arms: his skin disappears to reveal red cabled veins pulsing with light and hinged shining metallic replacements for bones, tendons, and ligaments. The voiceover explains the device's transformative promise: "turning you into an instrument of efficiency."

The promises of advertisers often run in parallel with stories in the popular press. In the spring of 2012, Anne-Marie Slaughter, former director of policy planning at the U.S. State Department, and current Professor at Princeton University, penned one of the most popular articles ever published in *The Atlantic*, see [30]. "Why women still can't have it all," tells of Slaughter's decision to leave the State Department in large part "because of my desire to be with my family and my conclusion that juggling highlevel government work with the needs of two teenage boys was not possible" [51].

Of course, Slaughter hardly left to become a housewife: "I teach a full course load; write regular print and online columns on foreign policy; give 40 to 50 speeches a year; appear regularly on TV and radio; and am working on a new academic book." As much personal story as manifesto for a new 21st century elite feminism, Slaughter lays out "what has to change" for women to succeed in high-power male-dominated careers. One of her key demands is that work-culture become less office-centered: "armed with email, instant messaging, phones, and videoconferencing technology, we should be able to move to a culture where the office is a base of operations more than the required locus of work."

ICTs are held up as creating new possibilities for living by offering new possibilities for integrating work and home responsibilities and achieving flexible work schedules.

A 2007 Verizon ad evocatively depicts Slaughter's call for work and home integration[13]. The text at the top of the ad reads, "Get the smartphone that does it all so you can too." In the foreground, we see a woman smiling and typing on her Palm Treo. In the background, we see that she is at the library. Two young kids sit calmly at a small table, seemingly involved in the books in front of them, with no need for adult attention. Verizon promises that with the aid of new technology, one can finally "do it all"–be a productive and connected professional while simultaneously getting face time with the kids and living up to expectations of motherhood. The smartphone enhances the mother's capabilities such that a successful contemporary life seems to *require* the smartphone.

Dis-integration
The second popular trope tells a radically different story about the smartphone. Reframing the device in a threatening and dangerous light, the story of dis-integration foregrounds "An Ugly Toll of Technology" [43] and calls for individuals to detox and disconnect. In this story, users of smartphones are portrayed as a *distracted addicts*. They are so engaged with what's happening on their phones, that they are unable to focus on the the physical world and cannot build positive interpersonal relationships. Articles instill fears about the "Risks of Parenting While Plugged In" [49], and claim that constant connectivity causes distraction, shallow thinking, and wasted time [45].

In contrast, non-users are figured as more *authentic humans*. Through detox and disconnection, they can focus on those around them, think complex thoughts, and be more successful human beings. Taking on the language of addiction and vice, this is not a story of compromise (putting the phone down at dinner time) but, in the ideal, calls for a more complete rejection of technology.

In framing the contrast between the 'distracted addict' and the 'authentic human,' the narrative of dis-integration engages with the same overarching values that are so crucial to the integration story. We now re-examine the meaning of these values and the strategies for enacting them in light of this second trope.

Autonomy & Control
In a recent article about the perils of contemporary technology, Matt Richtel opens with, "Stuart Crabb, a director in the executive offices of Facebook, naturally likes to extol the extraordinary benefits of computers and smartphones. But like a growing number of technology leaders, he offers a warning: log off once in a while, and put them down." Even in this "place where technology is seen as an all-powerful answer," Silicon Valley executives are reportedly concerned "that the lure of constant stimulation–the pervasive demand of pings, rings and updates–is creating a profound physical craving that can hurt productivity and personal interactions" [46]. In contrast to Slaughter's opinion that the spread of communication

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[11]*TIME*, August 12, August 26, 2002. *Wired*, October 2002.
[12]At time of press, viewable at `http://youtu.be/q8bSLMcerCc`
[13]*TIME*, April 30, Mary 14, 2007.

technologies improves everyday life and makes it possible for people to be more successful, in this story, these same devices make people feel "not just addicted, but trapped."

In this story, attending to email at home is not about flexibility and mobility, but is instead figured in terms of a leash and a constraint. Concerns about addiction suggest out-of-control users, who are unable to regulate their activities and have become subjugated by the technology and its "pings, rings, and updates." Individual autonomy is thus enacted by detoxing and removing technology from everyday life. The 'authentic human' experiences freedom through unplugging and, thus, being able to focus on 'what matters.'

Togetherness & Community
In a *New York Times* article titled, "Who's the Boss, You or Your Gadget?" Mickey Meece writes that it is the adoption of smartphones, text messaging, video calling and social media that make it possible for people to stay "connected 24/7." But, this "connectivity" is not the same as "true presence." Meece observes that, "too often, people find themselves with little time to concentrate and reflect on their work, or to be truly present with their friends and family" [41]. News headlines figure the BlackBerry smartphone as particularly symbolic of such contemporary anxieties: Sinead Mcintyre writes in the *Daily Mail* that "BlackBerry Addiction [is] 'Similar to Drugs'" [40], Vicki Salemi asks in *SheKnows: Parenting* "Is Your Child a BlackBerry Orphan?" [48], and Elizabeth Bernstein queries in the *Wall Street Journal*, "Your BlackBerry or Your Wife?" [11].

Even Microsoft, who is seemingly in the business of selling smartphones, promoted their new Windows Phone 7 devices through an appeal to this story of dis-integration in a series of commercials from 2010. In one of these commercials, a video montage highlights a series of apparently problematic smartphone use-cases punctuated by the refrain "Really?" One scene, depicting a family around a dinner table resembles closely the cartoon illustration for Bernstein's article, "Your BlackBerry or Your Wife" [11]. In the cartoon, a family of four sits on a sofa, all eyes on individual screens. Even the dog has a tablet. In the Windows Phone commercial, Mom, Dad and an older daughter are each fixated on their own individual smartphones. The younger son is sitting backwards in his chair, forlorn face directed at the camera, with no device in his hands. Other scenes depict people on their phones in the bedroom and in the shower, a father distracted from playing catch with his daughter, and a surgeon texting at the operating table. The narrator says, "we need a phone to save us from our phones" and suggests that the new Windows Phone can do just that because it is "designed to get you in and out and back to life." The ending scene depicts a young man and woman out at dinner. He puts his phone into his pocket and looks up to meet the eyes of his date; they both lean in towards each other smiling; Microsoft overlays the tagline "be here now."

Enacting togetherness and community in this story is about dis-integration. A recent episode of *Modern Family* depicted the fictional Dunphys attempting to "disconnect" from various communication technologies in the hopes of improving their family dynamic. In Bernstein's *Wall Street Journal* column, she referred to this television episode and suggested that real (non-fictional, not TV) families might benefit greatly from a technology "detox" or "cleanse" [11]. She writes, "Like an extreme diet that cuts out all processed foods for a short period of time with the promise of lasting good health, a technology cleanse means you unplug for a short time with longer-term benefits for your relationships." Appealing to a nostalgic desire for a slower and more traditional life, she tells a story of a family who–after giving up electronic devices– had "family meals, played board games, and read the newspaper on Saturday mornings." She even implies that a tech detox could increase the quality of parents' sex lives.

Productivity & Effectiveness
These narratives are not just about work-life balance, nor are they only a concern for people with families. We also find numerous stories in the popular press about organizations struggling with intense ICT use. Executives point to studies showing the productivity costs of distracted employees and the loss of concentration triggered by email use, in particular. One case in point is the story of Jay Ellison, executive vice president of U.S Cellular who, after reportedly suffering from "cyber-indigestion," wrote a memo to all employees stating: "I'm announcing a ban on e-mail every Friday ... Get out to meet your teams face-to-face. Pick up the phone and give someone a call.... I look forward to not hearing from any of you, but stop by as often as you like" [27].

In explicit counter to the figure of the technology non-user as someone "out of touch," Harj Taggar, a young partner at the startup incubator Y Combinator, recently blogged about his own experiments with removing apps from his smartphone [60]. He first disabled the email app, which helped him "break the urge to login and check email while e.g. walking or during a conversation." He found the initial adjustment process "surprisingly difficult," but writes that, over time, "this feeling passed and was gradually replaced by a feeling of liberation." He argues that "Having time to think is precious... and... important if you want to achieve anything close to original thought."

DISCUSSION
Articulating these stories highlights the values promoted by these visions of *integration* and *dis-integration*. These visions should not be dismissed as mere stories manufactured by marketers or journalists and which circulate only in the media. Long-standing narratives of what a successful American life looks like echo within both visions. Furthermore, the continued circulation of stories like these–not only in the media, but also in everyday conversation and academic work–matter for everyday experience. As we noted previously, we have encountered these stories repeatedly within many of our fieldwork contexts. Although this paper is not a full re-analysis of that data, we now draw on selected excerpts to help re-contextualize both tropes in the moments of everyday life. We will now explore how the four distinct subject positions relate to lived experience and examine the ways in which core values are conceived and enacted across the two narratives.

Assumptions of Agency in a Connected World

Both stories figure the human as an individual with total agency–agency to orchestrate one's interactions with others and to determine where, when, and how to allocate attention. Agency, however, is always lesser, distributed, more complicated, and connected to other things–people, objects, institutions, and histories [57]. Agency is not unidirectional, stable, or sedimented in any one person or technological object [4].

Take, as one case, the previously mentioned *New York Times* article, "Who's the Boss, You or Your Gadget?" Author Micky Meece opens with an anecdote about Karen Riley-Grant, a marketing executive at Levi Strauss, using her smartphone while in labor with her first child, decidedly a problematic activity to Meece. He goes on to explain how, through the help of a personal life coach, Ms. Riley-Grant was able to negotiate certain evening hours and weekend days as times when she could turn off her iPhone. The article implies that this highly-scheduled and coordinated detox plan provided a lasting 'solution' to Ms. Riley-Grant's stresses and anxieties.

However, for those individuals who are not high powered executives in a position to hire a personal life coach and dictate their availability to others, such a disconnection hardly seems practical. Furthermore, in our own fieldwork, we have found that those at the top of the corporate hierarchy often feel even more encumbered by their smartphones than their subordinates–the internalized pressure of their subordinates' dependency motivates *constant* connectivity.

Thus, individuals do not have the agency to simply 'disconnect.' Everyone, even the upwardly mobile professional, is caught in multiple webs of expectation involving colleagues, bosses, spouses, children and friends. Dis-integration would, in reality, entail not just the removal of the smartphone, but a *disintegration*–a fracturing, a shattering, a collapsing–of a whole way of life. Smartphones are embedded in varied and multiple practices of work, care, pleasure, and sociality. They cannot be dis-entangled from these practices in a simple and straightforward manner.

Concomitantly, a technological object does not have the agency to radically reconfigure one's life. Technologies alone do not cause 'addiction' or 'distraction.' Rather, they provide capacities that people take into account and negotiate in establishing norms, expectations, and patterns of interaction. Likewise, smartphones cannot single handedly transform one's level of control and mobility. Working outside the office is certainly made easier by the capacities of remote accessibility that tools like smartphones offer. However, this capacity alone does not make it reasonable for everyone to start working from the kids' library, pool, or ski slopes.

Recall the story of AT&T's Bradley. While in an all day meeting, he emails his assistant to request delivery of some documents he forgot to bring along. Nowhere in this story of command and control is there any attention to the other side of Bradley's communicative act. The assistant isn't interrupted in the midst of something else; and [s]he importantly doesn't talk back. Likewise, the ad does not take into account the impressions of others in the meeting. In our fieldwork, however,
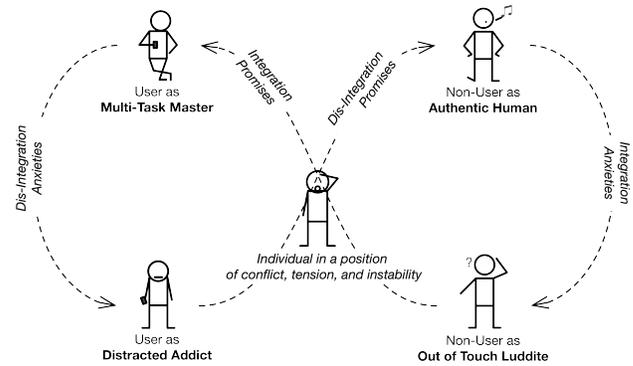

Figure 1. Interactions between the two smartphone tropes

assistants get peeved and people are frustrated by others' use of smartphones during meetings. In the messy context of everyday life, communication is never an individual act, and, interacting with technology doesn't happen in a vacuum.

Inhabiting multiple subject positions

Despite the difficulty of embodying either of the idealized subject positions, our fieldwork suggests the importance and impact of these stories. In informal conversations and interviews, our participants frequently make attempts to align their actions and account for their experience of the smartphone in the terms of these narratives. However, because each story re-figures the moral valence of the user or non-user in an opposite light, individuals seeking to align themselves with aspects of both narratives are never able to locate themselves in a stable subject position.

In Figure 1, we illustrate how engaging with both narratives fuels a cyclic path through the four subject positions. The first narrative compels one to move from 'out of touch luddite' to the 'multi-task master' by adopting and integrating the smartphone in daily life. However, upon achieving the role of 'multi-task master,' one is immediately threatened by the second narrative. Fears about the damaging impacts of the smartphone place the user on a precipice, always at risk of slipping into the subject position of the 'distracted addict.' As the second trope re-figures the smartphone user in a negative light, it compels the user to dis-integrate the device from daily life in order to become a more 'authentic human.' Of course, once aligned with this position, the now non-user is again at risk, this time of feeling like an 'out of touch luddite' which returns one to the arc of the first story, towards smartphone adoption and integration.

In practice we find that individuals shift between the various positions far more erratically than this neat diagram might suggest, but the pressures towards each of the four subject positions are very real. Take the case of Mark Smith[14], criminal defense attorney, and father of two young kids. The technological possibilities of the smartphone–the promises of being able to work from anywhere, of answering calls and fielding emails from the sidelines of a little league game–allow Mark come home early (at 2pm) one day a week. In fact, the

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[14]All participant names are pseudonyms.

promises of constant connectivity oblige Mark to come home early. The capacity for mobile connectivity means he cannot 'reject' his children by skipping the little league game.

Yet, Mark complains about having to take calls on the sidelines, and worries about whether he is being a good parent if he is not fully "present" for his family. He calls his phone a "nanny" and he and his wife, Bobbi, both report having conversations "more than once a week" about their phone use, the "constant level of stress" they feel, and a tension between demands to be "24/7" and a simultaneous feeling of "not wanting to be reachable." Clients of his law practice expect a high level of responsiveness during all hours of the day. He has set up some "ad hoc" attempts to "untether" by turning his phone off for a few hours at a time, but emphasizes that it's very "random." On weekends, he defers responding to messages if they're not urgent, but he still reads each one in case it is. He talks about this "self-limiting" as "my push back," but in the course of the same conversation asks Bobbi, "How would I even rebel?" He briefly speculates about what it would mean to stop using technology but quickly decides that it would be "such a luddite move." Bobbi feels like,

He doesn't need to pick up the telephone every time. But then, his argument, which I totally appreciate, is, but if I don't, then he doesn't stay at the top of the heap.

As the sole income-earner for his family, Mark has an increased burden of responsibility to do just that–or to at least stay near enough to the top that they can continue to afford their well-off lifestyle. Mark's struggles are echoed by numerous fieldwork participants who describe a state of instability, hopping between subject positions without finding sustainability. These acts of re-alignment–of re-positioning one's subjectivity–might happen in the course of a minute or less and not always in a cognizant manner. As Kathy, in-house counsel for a large firm describes,

The BlackBerry is difficult because we're all working parents. You see the red light and you are immediately curious who it is. It's like, I know I need to spend time with my little girl Lilly, she is going to bed and I don't get enough time with her as it is. And I know I don't really need to check. But you see that red light and you are tempted.

Even during her most 'authentic' moments, like giving her daughter a bath, Kathy fears missing something on the BlackBerry. She is tempted to check yet simultaneously knows that she doesn't *need* to check. None of these conflicting pulls and desires undermine the fact that she genuinely wants to focus on her daughter. We are reminded by Kathy, Mark, and many others that real-world individuals experience their subjectivity in a state of flux and continual re-negotiation.

The pervasive tropes of how one 'should' be in terms of a smartphone influence how people understand and account for their actions. These narratives shape desires, fears, and individuals' underlying sense of whether or not they are doing a 'good job' (at being a parent, an employee, etc.). While individuals often identify with these subject positions and strive to be 'multi-task masters' or 'authentic humans,' they cannot exist within any one idealized state for very long. The web of expectations and internal desires to succeed in multiple social

contexts wrenches them from one subject position to another and, in so doing, forces an ever shifting relationship to their smartphone.

Practices & Values in Conflict

Our analysis shows how both tropes are organized around, and operate in terms of, the same core values. In each of these stories the goal is to exert autonomy & control over one's life, to achieve togetherness & community with friends, family, and colleagues, and to be productive & effective in daily life.

Although the same core values motivate both of the contrasting narratives of integration and dis-integation, each trope presents a radically different image of how to experience and enact each value. Is autonomy experienced as controlling interactions with others through practices of constant connectivity? Or, is autonomy experienced as the power to push interactions away in order to focus on one's immediate temporal and physical environment? Is togetherness experienced by being at the ready for queries, questions, jokes, and banter? Or, is togetherness experienced as eye contact, long conversations, and physical presence? Is productivity experienced as being 'in the know' and always there to facilitate the flow of work? Or, is productivity more a matter of focus and the ability to delve into a project without distraction?

When the values embedded in these narratives are spelled out two points become strikingly clear. First, the *practices* required to enact the alternate visions of each core value are mutually exclusive. A person simply cannot be enacting the integrated vision of togetherness while engaging in the dis-integrated vision of the same value. Second, while the practices may be mutually exclusive, the *experience* of these alternate conceptions is not. As it has become apparent in our ongoing fieldwork, people do not experience productivity as *either* monitoring email to make sure they don't hold up the flow of work *or* separating oneself to focus on a specific task. Productivity is both experiences and therefore requires incommensurate practices. This conundrum is equally apparent in the enactment of autonomy and togetherness. Just as individuals are continually hopping between subject positions, they do not experience 'values' as stable states that can be achieved through one clear path.

Building from the work of those who remind us that values are experienced and enacted [2, 32] we assert that designers should critically examine the countless and conflicting ways in which any one 'value' is experienced in-practice. This work suggests that design would be served by articulating and teasing apart the various visions put forth as enabling core values and examining the practices associated with each vision. Designing for autonomy & control, community & togetherness, or productivity & efficiency within the construct of the integration narrative would lead to a dramatically different outcome than designing for these same values within the narrative of dis-integration.

CONCLUSION

We exist in a sea of powerful stories: They are the condition of finite rationality and personal and collective life histories. There is no way out of stories; but… there are many possible structures, not

to mention contents, of narration. Changing the stories, in both material and semiotic senses, is a modest intervention worth making. –Haraway [25, p. 44-45]

The stories that circulate about the smartphone in American culture matter. They matter for how individuals experience the device, the ways that designers envision future technologies, and the ways that researchers frame their questions. In this paper, we have articulated and examined two pervasive tropes of the smartphone in American culture. We have shown how these stories configure ideal subject positions that are opposite and mutually exclusive. In so doing, these stories participate in creating unreasonable expectations of agency and action on both the part of technologies and people. The individual is expected to regulate his or her communication habits without regards for the needs and desires of others. The smartphone is tasked with the capacity to radically reconfigure one's life as if the individual existed in a social and cultural vacuum.

In reality, individuals and technologies exist in a "sea of stories"–in the midst of texts, histories, norms, and the constraints and capacities of infrastructures and technologies. The popular media stories that we highlight reverberate, often implicitly, in the disciplinary rhetoric that frames research questions and influences design. These stories also figure smartphones and subjects within other, related cultural discourses. Stories of the "do it all" mom appeal to a certain work ethic, norm of mothering, and ideal of a contemporary woman. Promises of integrated work/home/leisure echo ideals of gendered techno-work and techno-leisure implicit in a variety of technologies [54]. Smartphones envisioned and designed as ubiquitous computing devices share ideals of invisibility with architectural designs from the 1950s [55]. Nostalgic visions of an American family *before* mobile ICTs often appeal to widespread idealizations of a fictive "Leave it to Beaver" era [16]. Smartphones designed as tools of efficiency and productivity play into decades-old Taylorist values [50].

These kinds of sedimented socio-material and cultural-historical entanglements lead Phoebe Sengers to ask "can IT design as an influence compete with a pervasive cultural atmosphere of overwork and overload?" Sengers suggests that it "may be most fruitful to try by integrating critically reflective technology design with other activist modes for influencing individuals and communities" [50]. In line with other reflections on disciplinary rhetoric [19, 20], we would like to suggest that while activism might take many forms, one starting point is recognizing our own role not just as designers of things that impart certain values, but also as storytellers.

We have shown that the relationship between values, technologies, and practice is less straightforward than one might presume. People experience their subjectivity in a state of flux and ongoing negotiation in relation to the subject positions figured by multiple contradictory narratives. Identifying a particular value does not imply a singular best practice for enacting that value. Conversely, the design of an object or interaction doesn't always translate in a straightforward manner into everyday practice. Designers work from within the constraints and limitations of existing infrastructures, his-

tories, and expectations. Users re-interpret and appropriate technologies outside the bounds of what designers might ever imagine. But designers are still in the business of telling stories through form, interaction, and signification.

Members of the CHI community have many opportunities to intervene in this sea of stories, both materially and semiotically. The culture of smartphone use is still in its relative infancy, making this a critical moment for activism that aims to shift norms or social conventions. Our data suggests that people are struggling to locate themselves in the overly simplistic stories they encounter about smartphones. We might work to tell more complicated stories. We might wrestle with questions of what it would mean to design for conflicting values and multiple subject positions. We might resist a tendency to design for discrete or stable personas. Recognizing inherent multiplicity and refraining from re-iterating a totalizing story of value or best practice might itself alleviate some of the anxieties that arise when people struggle with these conflicting stories. Maybe multi-tasking on the little league sidelines feels okay if one is 'present' around the dinner table later. People are neither 'multi-task masters' nor 'distracted addicts'. People can't be *only* technology-free 'authentic humans,' because they also can't be luddites. If there's more than one way to do it right, then instability might be a good thing. Each time we report our research we have an opportunity to resist the simplification of our findings and avoid clearcut divisions between good and bad. We can strive to articulate nuance and instability. We can strive to provide new, less impossible subject positions and to imagine lifestyles, not of ideal stability, but shifting sustainability.

ACKNOWLEDGEMENTS

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