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Thinking of You: Vernacular Affordance in the Context of the Microsocial Relationship App, Couple

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Abstract

The concept of "affordance" stakes out a middle ground between social constructivism and technological determinism, seeking to account for how material qualities of technologies constrain or invite practices while also accommodating emergent meanings. Yet we know little about how people themselves understand affordances in their encounters with technology. This article treats vernacular accounts of material structure and practice as clues to the ways that people understand and negotiate technology in their everyday lives. We studied the experiences of romantic partners who use Couple, a relationship app touted as a "social network of two," and part of an emerging class of "microsocial" platforms. Partners who use Couple have limited knowledge of how others use the app, which offered us a unique lens for witnessing how people make sense of the relationship between practice and material structure. We conducted qualitative interviews with romantic pairs who use Couple, attending to how interviewees conceived of its capabilities, features, and position within larger media ecologies. We argue that affordances simultaneously exist for people at multiple levels of scale, for example: infrastructure, device, app, feature, and so on. These levels are theoretically distinct but can intersect conceptually as people make sense of technological systems and adapt their practices, or create new ones. This approach opens up new ways of understanding the relationship between technologies and practices by drawing attention to how different vernacular frames, such as "choice" or "constraint," reflect particular ways of accounting for material structure.

Keywords

affordance, vernacular, microsocial, interpersonal communication, Couple, materiality

Introduction

Renewed debates pitting social constructivism against technological determinism have resurfaced at the intersections of Communication and Science and Technology Studies (Lievrouw, 2014; Neff, Jordan, McVeigh-Schultz, & Gillespie, 2012; Wyatt, 2008). But these two theoretical approaches still stand at an impasse, neither entirely satisfactory. For some scholars, the concept of affordance has offered a middle ground, or "third way" (Hutchby, 2001b), that addresses how people make emergent meaning through interactions with technology, while also accounting for the ways that material qualities of those technologies constrain or enable particular practices (Baym, 2015; Hutchby, 2001a, 2001b). Affordances are neither deterministic nor relativistic, but rather *relational* (Hutchby, 2001a, 2003), in that they are defined by the relationship between the materiality of technological artifacts and the lived practices of communication.

Psychologist James Gibson (1977, 1979) first introduced affordance theory in an effort to rethink the psychology of

vision in terms of the relationship between an organism and its environment. This theory connected the body of a specific organism to a specific set of actions (e.g., hiding, throwing, climbing, eating) enabled by the "ecological physics" of an environment. His key insight was that an organism's vision is inextricably linked to the physical relationship between an environment and the actions that its body can take within that environment. Gibson argued that vision parses the perceivable world according to these embodied action-capacities, which he dubbed "affordances."

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Later Donald Norman adapted affordance theory from Gibson's psychology of vision to account for the ways that designed objects convey their action-capacities to users (Norman, 1988). Key for both Gibson's and Norman's formulations is the idea that affordances have formal properties accessible through perception. An important difference, however, is that, for Norman, affordance is a prescriptive concept.[1] Since the action-capacities of computational systems can be hidden from view, it is up to the designers of interfaces to convey these capacities through effective design decisions. For Norman (1999), well-designed interfaces convey a conceptual model of "perceived affordances" that aligns with the "real affordances" of their underlying technical systems. His approach also excoriates interfaces he identifies as examples of "bad design," since their affordances are *not* directly perceivable and must be learned (Norman, 1988, 2009).[2]

In the humanities and social sciences, the term "affordance" has been used more broadly to account for the ways that technological artifacts or platforms privilege, open up, or constrain particular actions and social practices. Ian Hutchby (2001a), arguing against Grint and Woolgar's (1997) approach to technologies as discursive constructions, borrows the concept of affordance to explain how the technology of the telephone activates particular communication practices. Scholars have since adapted this notion of affordance for a wide range of purposes, for example: to describe the capacities of social media infrastructures (boyd, 2010), to address the social affordances facilitated by technological change (Wellman et al., 2003), or to make sense of the mutual-shaping trajectories of reconfiguration, remediation, and re-formation (Lievrouw, 2014).

While the concept of affordance has gained purchase within the Communication and Information Science fields, its meaning has drifted from Gibson's original focus on perception. This shift has enabled scholars to apply the affordance concept to more abstract relationships between computational systems and practices. For example, arguing that "technological changes create social affordances," Wellman et al. (2003) group a broad range of phenomena under the rubric of affordance, including infrastructural capacities like bandwidth, cross-platform design concepts like personalization, device specific features like wireless portability, and broad sociotechnical phenomena such as globalized connectivity. Such a broad range of phenomena no longer fit neatly into the framework of "perceived action-capacities" that defined affordance in its original formulation. Indeed, for some scholars, rather than emphasize perceptibility, it is the *invisibility* of certain affordances that becomes central, as in boyd's (2010) discussion of network affordances, where she argues that capacities like persistence and searchability make people susceptible to unanticipated risks of context collapse. In cases like these, social scientists have productively deployed the concept of affordance to pose more abstract questions about how technological infrastructures shape or constrain broad patterns of practice.

So, without discounting the value that this approach offers, we want to engage a different set of questions by attending to the ways people *themselves* identify and make sense of affordances. In this sense, our approach is in line with Silverstone's domestication perspective (Silverstone & Hirsch, 1992). Where domestication focuses on how people make sense of technological objects such as remote controls or televisions in everyday relational life, we focus on what vernacular accounts of the relationship between practices and technologies reveal about how people make sense of material structure at different levels of scale.[3] By attending to the nuanced sense-making processes at the intersections between these levels, we can open up new avenues of theoretical inquiry.

Our analysis will suggest three core insights. First, affordances are made sense of in and through practice. Second, people understand affordances not as a distinct aspect of a single artifact, but rather as nested layers at different levels of scale. Likewise, affordances are not experienced in isolation, but rather in relation to a complex ecology of other tools with other affordances. Third, sometimes affordances are invoked strategically as "choices" and other times as "constraints," and these distinctions map onto particular ways users account for material structure.

Affordances and Sense-Making

While we do not advocate strict adherence to Gibson's narrow focus on vision, nor to Norman's prescriptive approach, we seek to reclaim the original emphasis that affordance theory placed on perception, as an encounter between bodies and artifacts. Affordance as a concept was initially powerful because of its relationality—the way that it connects a perceiving subject to a set of materially embedded action-capacities. We hope to recuperate this emphasis on perception as a core component of affordance[4] by reframing perception in terms of sense-making. Both Gibson's and Norman's notions of affordance are constrained by an emphasis on *visual* perception, as opposed to other kinds of sense-making processes that unfold over time or that engage multiple actors through experimentation. Sense-making, then, is broad enough to let us address these more complex aspects of perception that emerge through mediated encounters.

While designers have distinguished between "perceptible" versus "hidden" affordances (Gaver, 1991; Norman, 1999), a sense-making approach to affordance helps us to build upon and problematize these categories by demonstrating how affordances can shift from "hidden" to "perceptible" through extended engagement. For example, people may find latent affordances available as they discover them over time or invent new practices unanticipated by designers. Similarly, hidden capacities of technical systems may surface in cases of interface redesign or infrastructural breakdown. It is these sorts of unfolding relationships, emergent practices, and sense-making processes that we aim to underscore with the notion of vernacular affordance.

This emphasis on the role of sense-making in shaping vernacular affordances shares ground with the concept of media ideology (Gershon, 2010a, 2010b). However, our approach—while complementary with the theories of semiotic ideology that inform Gershon's framework[5]—nevertheless retains from affordance theory an emphasis on the ways that technologies can also exceed their semiotic dimensions, insofar as affordances can prime, resist, or otherwise shape the ways people make sense of a technology.

We hypothesize that vernacular affordances might be particularly evident in contexts where communication norms are up for grabs and actors have opportunities to "invent the rules as they go along." In such contexts, the action-capacities made available by communication technologies may be particularly salient *and* available for reflection. In the following section, we will argue that microsocial platforms offer unique opportunities to see how people grapple with new or unfamiliar affordances, invent new practices, and experience new relationships to technology unfold.

Microsocial Media and the Couple App

This article offers a close analysis of how a small sample of relational partners made sense of the vernacular affordances of an app called Couple. Formerly known as Pair,[6] Couple launched in March 2012, one among a larger class of so-called microsocial applications. Microsocial apps represent a growing class of social media that cater to small groups rather than large social networks. Media accounts have characterized microsocial platforms as an antidote to the uncertainty of multiple audiences and the risks of context collapse associated with Facebook and Twitter (boyd & Heer, 2006; Marwick & boyd, 2011). Extending this logic of constraining the audience of social media, Couple has been touted by its founders as a social network for two (in that the app allows you to pair with only one other person[7]).

In cases where microsocial platforms compartmentalize their users into pairs or small groups who communicate only with each other, patterns of use may be less likely to circulate and become standardized across a platform. People typically learn by imitation, so by constraining this "over the shoulder" effect, such contexts offer users more room to figure out on their own what a platform "is for," possibly even inventing new technologically mediated practices in the process. These kinds of microsocial media, then, offer a unique opportunity to understand how people make sense of affordances by engaging with the material structure of a relatively unfamiliar platform.

Relationship apps constrain the "over the shoulder" effect even further since they are typically designed to be used by isolated pairs. Moreover, research has demonstrated that intimate couples form their own unique communication idioms (Hopper, Knapp, & Scott, 1981; Parks, 2007; Waller & Hill, 1951). Relationship apps, then, offer an opportunity to observe these kinds of idiomatic communication practices
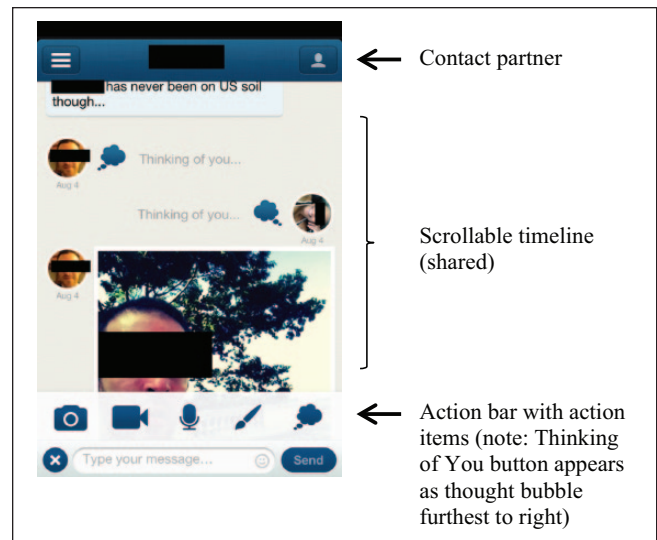

Figure 1. Timeline screen of the Couple app.

emerging in the context of a particular medium of communication. That said, we understand that microsocial platforms are not hermetically sealed environments; people borrow not just from their conversational styles but also from how they already use other media. Furthermore, as our own analysis will suggest, people can make sense of microsocial platforms like Couple by situating them within a broader media ecology or drawing upon similar capabilities of other platforms.

Making Sense of Couple

The Couple app's features offer a range of asynchronous communication modalities, including: text, photos (with various filters), movies, audio recording, sketching, a "Thinking of You" button, and location sharing. Additionally, the app also offers two synchronous features: "ThumbKiss" (a rudimentary haptic interface) and live sketching. The process of making sense of these features is likely to involve a certain amount of remediation (Baym, 2015; Bolter, Grusin, & Grusin, 1998) as people draw upon more mature genres of mediated communication (texting, photo sharing, etc.). But Couple's interface also offers opportunities to defamiliarize and reinvent these more familiar communication practices anew, as partners integrate these features into a "home-grown" system of illocutionary and phatic signification.

Couple's default interface is organized around a shared timeline. Partners add to this timeline by making posts using a variety of features from the Action Bar (see Figure 1), including: photos, video, audio, sketches, the "Thinking of You" button, location share, live sketch, and ThumbKiss. In addition, there is a text field in which partners can add text or emoji-like stickers to be added to the timeline.[8] New items posted to the timeline display a small "unseen" notice that disappears once it has been viewed by a partner. Another key
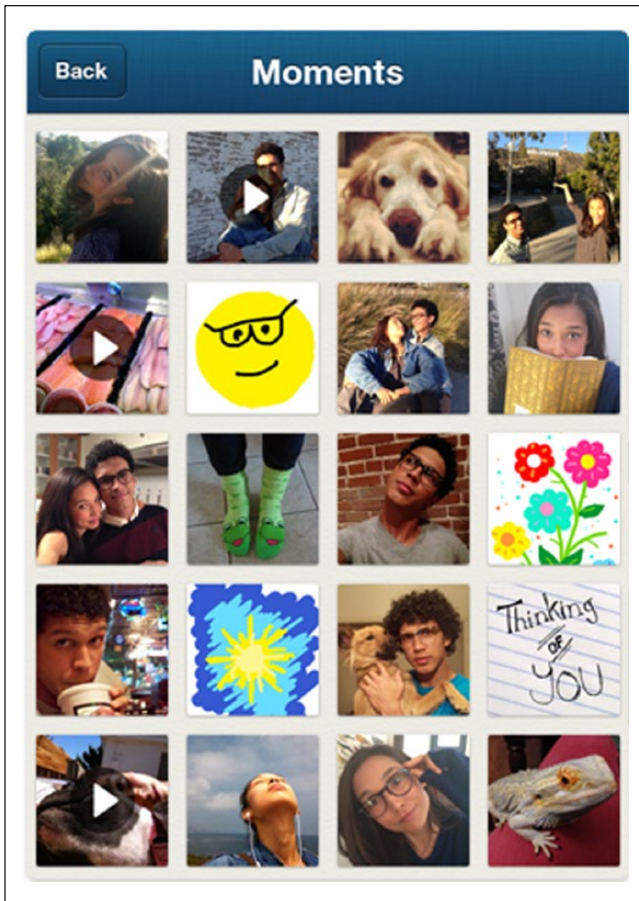
Figure 2. Moments screen of the Couple app. (Image from promotional advertisement.)

Figure 3. Sidebar of the Couple app.

interface module is a repository called Moments, where certain timeline items are arranged in a browsable grid (see Figure 2). Additional interface-features include a shared calendar and a collection of shared lists, all available via a sidebar menu (see Figure 3).

Exploring these various features, partners who use Couple are able to test out contextual appropriateness, attune to one another's temporal rhythm, or signal readiness to move from asynchronous to synchronous modes of communication. In other words, there is a great deal of opportunity for couples to negotiate or experiment with novel communication practices. Couple offers a particularly promising context, then, in which to witness and pose questions about the process of sociotechnical sense-making.

Our concrete research questions include the following: How do partners make sense of the app overall? What role does it play in their relationship? How do they use the different features available? What distinguishes the app from other communication tools they use? And how do these various processes of sense-making about the app relate to how partners think about the material structure of the media they use?

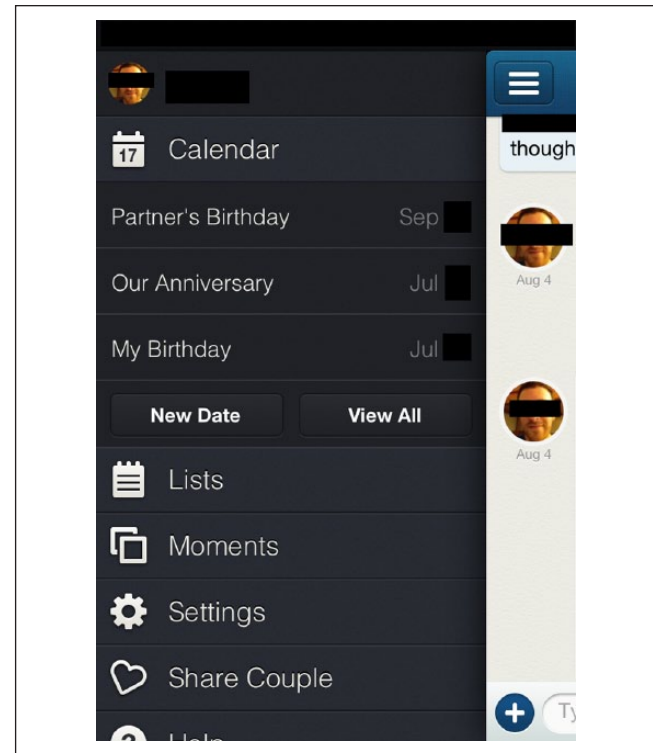In addressing these questions, we hope to demonstrate one possible way of analyzing vernacular affordances. We

observed that vernacular affordances can operate simultaneously at multiple levels of abstraction that relate to one another in complex ways. As our analysis will show, when accounting for the relationship between communication practice and technology, people in our study moved fluidly between various technological categories at different levels of scale, including infrastructure, device, operating system, app marketplace, platform, interface, interface-feature, and so on. While in many cases these analytical categories were conceptually clear, people's choices about which level(s) to invoke and how to connect different levels were nevertheless complex and revealing. For example, as we will show in our analysis, when people framed vernacular affordances in terms of "expressive choices," they tended to explain their practices by setting up contrasting alternatives within a single level (e.g., alternative platforms within an app marketplace or alternative features within a single interface). By contrast, when they framed vernacular affordances in terms of "constrained choices" or in terms of how a particular technology *shaped* their practices, they tended to make connections between *different* scales of material structure (e.g., accounting for use of Couple by referencing the constraints of a mobile phone infrastructure).

Methodology

Since we were interested in discoveries and analytical categories that we might not have been able to anticipate, we emphasized depth of interviews over breadth (and quantity) of

participants. We developed a small-scale qualitative study consisting of seven extended interviews (1–1.5 hr each). Each interview included both partners, for a total of 14 participants.[9] In addition to interviewing people who use Couple, we also conducted an interview with the founders of Couple after our primary interviews with participants were complete.

We sought out a range of participants, and our interviewees were racially and ethnically diverse, including Black, Asian, White, Latino, and mixed-race participants. All of the participants, except for one, were raised in the United States, but several had recent international ancestry. Their ages ranged from early 20s to 30s. At the time of the interview, three of the couples we interviewed were married, and one was engaged. Our participants included two couples who had been together for a year, while the rest had been couples between 3 and 10 years. Most were working professionals, but one couple consisted of two undergraduate students, and four of the participants were current graduate students. While we hoped to include partners from a variety of sexual orientations, we were only able to recruit heterosexual participants. More than half of the participants were currently in long-distance relationships, and all except one couple had spent significant time living apart. Most of the partners began using Couple as a way of staying in touch during a period of travel or long-distance separation. More than half of the partners had also used the app during international travel, a detail that highlights the educational and professional privilege that characterized the majority of our participants.

It deserves special mention that the first author is also a Couple app user and his experience with the app contributed to this study in several ways: (1) by driving the initial research questions that inspired this project, (2) by serving as a resource in the planning and direction of interviews, and (3) by giving him the emic perspective of an "insider" who shared overlaps in experience with interview subjects. To capture his experience within the formalized structure of this study, he elected to participate as an interviewee along with his partner in a special interview session conducted by the second author.

In four of the interviews both partners were physically present, while in the rest, one or both partners communicated via Skype. Due to the intimate topic of the interviews, we paid particular attention to designing a comfortable and private experience, both in terms of how we structured the ground rules (letting participants set their own boundaries of sharing) and in terms of how we constructed the space itself. It should also be noted that by attending to privacy we may have also inadvertently shaped the kinds of responses we elicited, by discouraging discussion of intimacy.

In the interviews, we asked them to reflect on their communication practices in relation to particular features of Couple as well in relation to a larger set of communication goals and tools. We also asked them questions about the following: when and why they first adopted Couple, what other communication platforms they used and in what contexts. We sought to understand (1) how participants made sense of the app overall, (2) what position the app occupied for them within a broader set of communication tools, (3) how they used different features available in the app, and (4) what role the app played in their relationship.

During interviews, we asked them to scroll through their Couple timeline as a way of illustrating their answers and informing new questions. We recorded audio of interviews, periodically took photos of the app screen, and recorded video of the app in close-up as they manipulated the interface or scrolled through their shared timeline.

Our analysis phase included coding of interview transcripts, as well as analysis of video. We began our analysis with open coding, and then, as it became clear that participants were talking about various levels of technological materiality, we did a more targeted coding that sought to draw out these distinctions.

Findings

Participants in this study demonstrated remarkable diversity in how they adapted the app's capabilities to a disparate set of emergent practices. While an exhaustive account of the diversity of practices is not possible here, we observed that couples developed unique patterns of communication, including photo taking as phatic communication, genres of sketching as gift exchange, and "selfie" videos shot and posted before bedtime. By attending to how partners talked about their practices using Couple, we began to understand the detailed micro-analytic creative work that people do to make sense of, and invent, new forms of practice alongside the adoption of novel technology.

Despite the diversity of experience we witnessed, several common themes emerged. We observed that participants conceptualized affordances at various levels of abstraction. These levels included infrastructural components like WiFi and cell phone reception, devices like laptops and mobile phones, operating systems, platform classes, specific platforms and their mobile app components, system-wide features of an app, selectable features within an app (some of which existed across multiple platforms and others that were apps specific), and finally specific interaction modalities such as swipe, hold, or buzz that get taken up by particular modules or features within an app.

In parsing these different levels of affordance, our goal was to identify how subjects accounted for, and utilized, these levels in their accounts of technologically mediated practice. To illustrate what we mean, in the following paragraphs we present different answers to the question "why do you use Couple?" that account for practice by pointing to a range of levels of material structure. For each level, we will provide a prototypical quote paraphrased from one or more of our participants:

1. *The Infrastructure level*, as we define it, refers to vernacular descriptions of a range of phenomena that underlie the use of the Couple app, from phone data

plans to reception to WiFi. An infrastructure-based account might look something like, "We started using Couple because text messaging was too expensive for us during international travel."

2. *The Media ecology level* refers to vernacular descriptions of communication platform alternatives, for example: email versus text messaging versus Facebook versus Couple. (Note that for some participants, this level even included alternative relationship apps such as Avocado.) This level addresses what Madianou and Miller (2012) describe as polymedia in that any one medium is understood in relation to the context formed by all the other media. An example of a *media ecology*–based account would be, "We tend to use text messaging for more logistical communication while Couple allows us to be affectionate and cute."

3. *The Platform level*, as we define it, refers to vernacular descriptions of a platform that treat it as a holistic unit aligned with particular practices or affective qualities. For example, someone might say, "Couple is a private space just for us." Note, in defining this level we are deliberately excluding discussion of specific systems or features contained within the platform (both of which fit into other levels described below).

4. *The interface-systems level* refers to broad organizational structures that shape and constrain the architecture of a platform. Since they represent fundamental structures of a platform they are less subject to choice or reconfiguration from within the app. Examples in Couple include the "Timeline" and "Moments" interface-modules, both of which shape the overall experience of the app, including special rules about inclusion and exclusion.[10] One prominent interface-system level observation that we encountered in several interviews was that Couple notifies partners of the "unseen" status of new posts to the timeline. Along these lines, an example of an interface-systems level vernacular affordance would be, "Couple increases the likelihood that we stay in touch throughout the day because my partner knows when I've opened the app to see what she's posted [since the unseen marker disappears]."

5. *The interface-features level* refers to vernacular descriptions of specific features within an interface. Within a single platform, interface-features usually map onto choices among a range of alternatives. For example, each item on the Action Bar in Couple represents a specific kind of feature that someone can use to post to the timeline. An example of an interface-features level vernacular affordance would be, "Couple's drawing feature allows us to be silly with one another."

6. *The input–output modality level* refers to all the generic input and output functionalities of a particular technology (in this case, highly determined by the user interface [UI] feature-set of an iPhone or Android phone). Input includes functions like tap, swipe, tap-and-hold, and pinch. Output includes things like scrollability, swipability, as well as functions like notification sounds and buzzing. An example of an input–output modality account would be the following:

> In Couple, all I have to do to stay in touch is hit one button, and I know that it will buzz in her pocket, and tell her I'm thinking about her. That makes it easier to stay in touch.

7. *The device level* is a category we are using here to include particular phone models along with operating systems like iOS or Android. We could have separated out these two phenomena into separate levels, but we are collapsing them here since people frequently lumped these categories together. An example of a device-level vernacular description would be, "We can't use FaceTime from the Couple app because my boyfriend has an Android phone."[11]

Note, we do *not* intend these levels to be taken as definitive, but rather as a heuristic for parsing the vernacular accounts we witnessed that gestured to various levels of technological structure. At the same time, while the categories themselves are heuristic, the phenomena they describe correlate with real, material distinctions in the world. Ontological differences between an app and an interface, for example, are not *only* discursive but also represent material distinctions that people themselves invoke as they make sense of relationships between affordances and practices.

While each of these levels can be understood as theoretically distinct, in practice they were rarely invoked in isolation and, instead, intermingled. People accounted for their technologically mediated practices by rhetorically connecting a range of levels within a single account. Indeed, the various ways these levels intersected are, itself, an important finding. For clarity, though, we organize the following observations and analyses so that they correspond to one or more dominant levels.

Infrastructure and Media Ecology

For the partners we interviewed, the decision to select Couple from among alternatives (like email, text message, and chat) was often articulated through reference to a level of infrastructure—for example, phone reception or international service plans. Partners articulated the constellation of different communication platforms not only in terms of what each was "good for" but also in terms of the prototypical kinds of

interactions that would be appropriate for one as opposed to another. In this sense, vernacular affordance talk does not just position the action-capacities of technologies in isolation, it also positions platforms within infrastructures and ecologies that themselves have their own constraining and enabling factors.

Participants frequently accounted for their decision to start using Couple by referencing a period in which their relationship was long distance and involved heightened attention to platforms of communication. Consequently, this initial decision to start using Couple was often explained in terms of infrastructural phenomena such as phone reception, WiFi availability, data-plan costs, or international data access.

For those separated by international borders, finding an alternative to text messaging figured particularly prominently in these origin stories. For example, Dimitri and Rebecca talked about first using Couple during Dimitri's international travel to Dublin. They accounted for this decision by citing two constraints: (1) a limitation on their ability to text message due to international travel costs of text messaging and (2) an inability to use Google Chat[12] due to Rebecca's work in retail.

Ryan and Doris similarly started using Couple during international travel, but by contrast, they framed the adoption of Couple as their primary form of communication in terms of *both* constraints *and* choices:

Doris: <laughs> And then we used it a lot especially when I went abroad for a trip because you can't text message easily then, right?
Ryan: Yeah, I think that was our peak usage, was yeah, when she was in Japan and I was here, she didn't have . . . she had emails. I think we could email but we used [Couple] a lot.

While both Doris and Dimitri talk about limitations on texting during international travel, Ryan frames the use of Couple in terms of a choice (contrasting it with email which she says they also used).

In other cases, participants cited lack of phone reception at a particular work or campus location as the reason Couple became an attractive choice since text messaging was not an option. For example, Daniel and Tiffany accounted for the decision to start using Couple by referencing limited reception on his campus. Like Doris and Ryan, Daniel felt that the primary alternative to Couple was email:

Daniel: Well, so Gmail, not even G Chat but Gmail because my school is a dead zone. The entire area around [my college] is a dead zone for reception . . . So I'm only—just basically on wifi all the time there. So texting is really hard to do. It's always been a really hard thing because she's like busy driving half the time to locations and visiting clients and working

and school. And, you know, we have to have some way to easily communicate since we don't live with each other. And I can't just be like, "Oh, I'll see you at the end of the day" and we'll just talk about it. So texting was really weird so we always do Gmail and that's like the most consistent way that we communicate. But yeah, that was it with any kind of media. We didn't really do pictures or anything like that.

For Daniel, an infrastructure feature—phone reception—along with Tiffany's limited attention to her phone while she works combined to make texting a less attractive option. While texting continued to serve as a channel for urgent logistical communication, both email and Couple accommodated regular check-ins without conveying a sense of urgency.

Nearly all of the participants reported a distinction between the kinds of things they would communicate through text message as compared with Couple. Lisa and Peter remarked that text message would be more appropriate for logistical communication that was time sensitive, and Rebecca used the term "logistics" to describe the kinds of communication that would be more appropriate for text message versus more "relationshippy" talk for Couple. The implication here was that text-based communications in the Couple app afforded greater elasticity in response time, while traditional text message was better suited to communicating time-sensitive information and coordination of shared plans:

Rebecca: We tend to—because we use texting so frequently when we're in the same country, Couple tends to be a little bit . . . less logistics focused and more talking about private relationshippy things whereas texting we'd be like "Are you coming to lunch today?" "I don't know. I'll let you know when I'm off the T." "Okay, well I have lunch at like one-thirty." And like figuring that stuff out, you know, scheduling, mundainities [sic].

Dimitri and Rebecca did show an example in which they used Couple to talk about logistic planning, but they pointed out that this was because they were communicating about topics that made them feel vulnerable and nervous: wisdom tooth surgery and therapy.

Moreover, several respondents contrasted Couple with social networking sites (SNSs), which were deemed less attractive places for romantic communication due to context collapse—here echoing one of the common selling points of microsocial platforms. Distinctions were made between Couple, text message, FaceTime, Skype, phone calls, and various SNSs. It was clear that for all the partners, the affordances of Couple were perceived through contrasts with other communication platforms.

This perspective was also echoed by Couple's developers, who described their vision for the app as a different kind of medium, one that promoted more intimacy and personal expression when compared to more prototypical social media, like Facebook:

[O]n Facebook and stuff like that, the medium is expressing yourself to many people, and you use a certain face and you use a certain kind of a—certain kind of information you portray to people to create your own personality, and we realized quickly that, we also have a different medium here where you express different things, and you can do different things in this medium. So, it was more personal . . .

. . .

[I]f you think about something like texting or iMessage, most of the time you kind of—you almost need an excuse to start a conversation on iMessage because, it has to be about something . . . But Couple is kind of a medium in itself that gives you an excuse already. Now all we have to do is send something . . . it allows you to share things that you wouldn't otherwise. Like, you're not going to like take a photo of what you're eating and send it to your wife over email. Like, nobody does that.

Here, the developers point to a particular vision of Couple that situates the platform in opposition to contrasting affordances, practices, media ideologies, and affective qualities associated with alternative communication platforms like Facebook, iMessage, or email. By articulating these distinctions in terms of a range of communication options within a media ecology, the remarks position Couple within a rhetorical frame of choice and personal expression. From this perspective, the "medium" of Couple—which licenses a particular kind of quotidian sharing—is liberating. Later, we will draw contrasts between this kind of framing of Couple as an agentive choice and alternative framings of the app that characterize it as constraining action or shaping relationships in particular ways.

Platform, Interface-Systems, and Interface-Features

In the previous section, we demonstrated how vernacular affordances invoke infrastructure or media ecology to account for mediated practice. In this section, we will move closer to the particular affordances available in the Couple app to demonstrate how various levels of platform, interface-systems, and interface-features become entangled. As mentioned in the previous section, participants often invoked material structure by mapping particular kinds of communication practices to particular platforms within a larger media ecology. In other cases, though, they described Couple holistically in terms of general affective associations like "private," "silly," or "affectionate" and without explicitly making comparisons to other platforms. When called upon to account for these descriptions, they would sometimes point to particular emblematic features of the app. Or in other cases, they would point to more fundamental interface-systems.

For example, a number of respondents talked about Couple in terms of its intimacy or privacy, and they pointed to prototypical features like sketching or Thinking of You as emblematic of this aspect of Couple:

Dimitri: So another thing I find personally that I tend to turn to Couple either as a complement but also as a more like intimate or personal space like to say thinking of you or to draw a silly picture.

But interestingly, these affective associations of intimacy also inflected the way they thought about the app overall, as well as how they thought about more familiar features of the app like texting and photos.

The affective qualities of one feature "bleeding" out to inflect the interpretation of other features is something that was also echoed by the developers. In particular, they observed that for many people, the ThumbKiss feature has come to stand in for the app as a whole:

When we created [ThumbKiss], we thought it was a cool feature . . . [W]e played around with it in-house and we're like, this could be fun. But . . . when we launched, everyone just hooked onto it like crazy and it became the thing that we're known by. People were like, "Oh, yeah, that's like that thumb-kiss app, right," and so we were like, whoa, what is going on here? We're so much more than a thumb-kiss app, you know? But they really caught fire, and so that's maybe quite true, what's important to people with these things, something that really inspires them to be intimate.

While this developer contends that the Couple app is "so much more," he also acknowledges the ways that this particular feature evokes a kind of intimacy that ends up licensing the space of the app as intimate overall. And this affective "bleeding" also inflects more familiar features of Couple, such as photo and text, encouraging partners to engage in more intimate kinds of expression through these channels when they are situated within Couple, as opposed to when they are used independently within Messages and Camera apps.

Such examples may seem to point us far afield from the original notion of affordance with its weighting of materiality over signification. However, from the perspective of the people using these apps, it is *as if* the material structure of Couple's text feature is different from text message precisely because what accompanies the text feature cues the experience (and communicates that cuing to their partner). The structure of the interface—with text and photos included alongside Thinking of You and ThumbKiss on the Action Bar—plays an important role in shaping the perception of intimacy as a quality that the Couple app affords.

Conversely, the developers also suggested that negative "bleeding" may also occur, as was the case in an early beta-test when they tried out Facebook registration:

> . . . [I]nitially we did the login system or the registration system through Facebook, and a lot of couples, like 50 percent of the couples, more than 50 percent . . . refused to use it . . . they didn't feel safe. They didn't feel private. So we decided not to do Facebook login or registration at all.

In this case, potential users may have felt that associations with Facebook undermined the supposed privacy of Couple.

Several participants also connected affective qualities of intimacy that they associated with specific features of the app to broader observations about Couple's position in a wider media ecology. For example, Ann remarked that she felt overwhelmed by other forms of social media, but . . .

> [Couple] is a manageable thing that is in my phone that also I know is always just me and Ramesh, and it can be more personal and funny, and I can send him little pictures, and you never worry that you're sending it to your boss . . . also the Thinking of You button, I think that's great. Because a lot of times I want to convey that in a text, but it's like what am I going to text, a heart? You know what I mean? I guess I could text a heart, but it's more fun to say like <sings> thinking of you. It's more complete and it's one button.

Note the different levels of material structure that Ann connects here: the phone as a device, specific features of the Couple app that license more intimate or silly forms of expression, partitions of visibility that limit the audience of Couple to just two people, contrasts with alternative modes of communication in a larger media ecology, and the ease of specific modalities of input ("one button").

System-Wide Features and "Being Structured-by" the Interface

The Couple platform is organized by fundamental technical structures that underlie interface-systems like the timeline and the Moments module. Indeed, the developers described the foundational role these two organizational structures play by contrasting them with Action Bar features, which were more amenable to change or augmentation through simple revisions of code. This distinction between interface-systems and interface-features, however, was rarely identified explicitly by the participants we interviewed.[13]

Instead, participants tended to address the interface-systems level more obliquely, for instance, by calling attention to how the app seemed to structure communication. For example, a number of participants felt that the Couple app impacted their relationship by altering the rate at which they communicated with their partner throughout the day:

Tiffany: Yeah, because normally if he's thinking of me and it's not for some specific reason that he needs to tell me, I wouldn't have known that. So it's nice for me I guess because over time I kind of have more insight in terms of how he's doing whereas he wouldn't have sent me an email in the past to convey "Oh, yeah, I'm thinking of you," you know. So I guess over time it's kind of changed [my] role . . . in day to day . . . communication.

Tiffany's partner Daniel made a similar point and emphasized the Thinking of You feature by comparing it to a text-based alternative:

Daniel: Yeah, so usually with the stuff that I'm doing—thinking about using Couple, I'm just like, "Oh, Tiffany, I haven't really communicated with her in a few hours. I wonder what she's doing." And . . . that thought like translates so easily in Couple because I just send a little thought bubble that says "Thinking of you" and she understands that that's what I'm saying. And no matter how really crazy busy I am, if I'm like, "Oh, yeah, Tiffany," and [if] I don't want to be watching the whole conversation or starting something, and I'm really wrapped up on work, [then] I'll just throw that out and then usually she'll respond back with the same Thinking of You thing, and then, you know, continue on with the day. But it's a different dynamic than [text messaging]—I always feel like if you start a conversation, it's a conversation and it has to kind of keep going and it's weird if you say, you know, "How's your day going?" "Oh, it's great. How is yours?" "Great." And then you feel like you've got to continue that. But if you're busy, it's not really very easy to do. . . . And then on the reciprocity note, **I think Couple kind of forces you into having to respond right away**. . . . Because she can see whether or not I've read what she's said <chuckles>. (Emphasis added)

Note the ways in which Thinking of You (an interface-feature) comes to stand in for the whole system of accumulated phatic check-ins enabled by the timeline. Daniel also draws attention to the ways Couple "forces reciprocity" at the same time that it makes reciprocity easier by shortening the time commitment involved.

As Daniel reflects on what he is doing when he thinks of connecting with Tiffany through Couple, he invokes material structure at various levels of scale. First, he brackets the platform level by talking about the app itself; then, he quickly dips down into a particular feature: the "Thinking of You"

button. Daniel points to this feature as a way of glossing a call-and-response practice that he and Tiffany understand as available during the work day, even when the two are busy with other activities. Then, pivoting to talk about whether there is an obligation to respond quickly to a Thinking of You, Daniel invokes a systemic feature of the timeline, namely, that your partner can see whether or not you have opened the app and looked at a recently posted Action Item. A number of interviewees echoed this point about how Couple affected their relationship, and even the developers brought up this phenomenon as something they had experienced in their own relationships, remarking that ". . . it's usually, you don't want to be rude, and this private space actually increases the expectation of getting your response once something is read."

Devices, Operating Systems, and Input–Output Modalities

Several of our participants suggested that they are able to avoid such immediate obligations for reciprocity by "seeing" the notification without entering the app itself. These preview notifications exist at the level of the mobile operating system and can be configured accordingly. We also found that in certain cases, iPhone and Android phones dealt with notifications differently. In fact, during our interview with Daniel and Tiffany, they discovered that Daniel's Android phone did not reveal the content of in-app texts from Couple as preview notifications, so consequently he would have to enter the app to see what Tiffany wrote. Tiffany, on the other hand, could view in-app texts from Daniel without opening Couple. She had a job that required her to be focused on her work and frequently noted Daniel's messages in Couple by glancing at her phone after it buzzed without opening the app so as not to alert Daniel to the fact that she had seen his message yet. In other words, for Tiffany, there was a distinction between "seeing" a message and officially reading it, while for Daniel this distinction was confounded by the way that his Android phone dealt with notifications. This meant that the obligations for reciprocity were actually experienced asymmetrically for this particular couple.

Integration of Vernacular Affordance Levels

When respondents made sense of their communication practices by referencing material structure, their ways of talking about materiality were different from those deployed by social scientists and design theorists. We might generalize to say that social scientists tend to privilege abstraction over the particularities of an interface and a communication goal. At the other end of the spectrum, design theorists tend to localize discussions of affordance in terms of specific interfaces. Contrasting both of these perspectives, our respondents tended to move fluidly between different levels of abstraction and scale. For example, they might account for a choice

of a particular communication medium over another by making references to infrastructural constraints in a particular context (e.g., bad reception at work). Or in accounting for how particular communication practices map to a particular platform, they might drill down to a single feature in that platform as emblematic of the whole—as when, for example, several respondents talked about Couple as defined by "silly drawings" or the Thinking of You button. Alternatively, they might account for communication practices in Couple through reference to a completely different kind of platform ("it's like a social network for two").

In this way, the vernacular affordance concept provides us with a way of positioning "materiality talk" as accomplishing, or as embedded within, particular rhetorical moves. For example, framing Couple as a choice among alternatives within a larger media ecology might underscore a sense of agency with the intention of strengthening closeness in a relationship. Conversely, accounting for Couple by drilling "down" to interface-systems level structures such as timeline notifications or to emblematic features like Thinking of You, one can draw attention to how the Couple interface increases expectations to stay in touch throughout the day. By deferring agency to the platform in such cases, users can point to experiences of feeling "structured by" the app itself. This observation about lateral versus vertical movement between levels seems to apply whether one is considering macro-scale structures like media infrastructures and ecologies or micro-scale structures like the specific features of an interface.[14] In each case, these different moves map onto rhetorical frames that have affinity with either techno-determinism/constraint, on the one hand, or with personal expression/choice on the other.

Conclusion

We have introduced the notion of vernacular affordance to demonstrate the theoretical potential of focusing on the sense-making involved as people conceptualize the relationship between material structure and practice for the technologies they use. We observed that this relationship can simultaneously exist at multiple levels of scale. The participants we spoke to rarely conceptualized units of material structure in isolation—as designers tend to do when they talk about the affordances of particular interfaces—but instead frequently connected various levels to one another. We have argued that the ways these levels are invoked and integrated can play a role in how people make sense of the relationship between technology and practice. By attending to this process, our goal was not to provide a definitive account of vernacular affordance overall, but rather to open up a different set of theoretical questions than scholars typically associate with the concept of affordance.

By focusing on vernacular accounts of material structure in this way, we hope to shift the theoretical conversation about affordance and open up several questions to drive future research: (1) If "affordance talk" can be understood as situated rhetorical moves (e.g., invoking frames of choice vs

constraint), where might researchers most productively map vernacular affordances outside the context of an interview-based study? (2) How might creators of technical systems relate to vernacular affordance as they make design decisions which either foreground or occlude particular levels of affordance?[15] (3) Finally, what are the political stakes involved in the design decisions that privilege certain levels of affordance over others, and what kinds of critical interventions can the concept of vernacular affordance make possible?

We grant that affordance theory has, thus far, offered a valuable framework for addressing the relationship between material structure and practice by drawing attention to aspects of technical systems that are "not constructed through accounts" (Hutchby, 2001a, p. 29). However, our contribution here has been to attend to the importance of how people do account for affordances and, in doing so, to begin unpacking the multiple and intersecting ways they make sense of the relationship between the material objects they use and the practices they use them for. We observed that people understand affordances at multiple levels and within a complex ecology of communication tools. Our analysis suggests that people move between, conflate, or substitute these levels strategically as they account for practices.

These insights also suggest ways that scholarly accounts of technology might become more reflexive. For example, theoretical oppositions between technological determinism and social constructivism may be related to parallel vernacular contrasts between "choice" and "constraint"—rhetorical frames that either account for or disavow agency. We see productive opportunities for scholars to attend more closely to these processes of sense-making, both in their own theoretical work and in the ways they frame the relationship between technologies and practices within their research.

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Notes

1. According to Norman (1988),

   Affordances provide strong clues to the operations of things. Plates are for pushing. Knobs are for turning. Slots are for inserting things into. Balls are for throwing or bouncing. When affordances are taken advantage of, the user knows what to do just by looking: no picture, no label, or instruction is required. Complex things may require explanation, but simple things should not. (p. 9)

   Norman (1999) later clarified this position, stating that he was intending to describe "perceived affordance" as opposed to "actual affordances" and arguing prescriptively that designers should seek to align the two.

2. Norman (1999) has also been vocal with his frustration that fellow design researchers misappropriated his concept of affordance, applying it to contexts outside the purview of directly perceivable interface-features and actions.

3. In pointing to the material aspects of seemingly immaterial digital structures, we draw upon research in a range of scholars who have adapted the concept of materiality to the realm of the digital (Blanchette, 2011; Dourish & Mazmanian, 2011; Fuchsberger, Murer, & Tscheligi, 2013; Gross, Bardzell, & Bardzell, 2014; Leonardi, 2015). Larger philosophical debates about the ontological status of digital materiality are beyond the scope of this discussion, but for the purposes of helping to unpack what we mean by affordance in the digital realm, we will state here that our vision of digital materiality treats the digital abstractions (Agre, 1997) of interfaces as perceivably constraining or enabling action-capacities in the same sense that Gibson grants to environments and objects.

4. Although what we mean by "perception" extends beyond the narrow focus on vision that Gibson and—to a lesser degree—Norman advocate.

5. Ilana Gershon's (2010a, 2010b) approach to media ideologies emphasizes how people's understandings of media shape their communicative practices. The media ideologies framework underscores how affordances can also be understood as constructions—since they are embedded within, inflected by, and standardized in relation to ideologies of semiosis. Such approaches to semiotic ideology are compatible with an emphasis on material structure. Indeed, just as Michael Silverstein (1981, 1979) demonstrates how language structure matters in shaping linguistic ideology, we can similarly examine the ways that the material structure of technology comes to matter in shaping how people conceive of the communicative possibilities of the technologies they use. In this sense, media ideologies and vernacular affordances are compatible concepts. The key difference is that "vernacular affordance" places comparatively greater emphasis on material structure and on what sense-making *about* materiality reveals about how people understand the relationship between technology and practice. So while both media ideology and vernacular affordance concepts consider the relationship between the material and the semiotic to be co-constitutive, media ideology tends to focus more on tracing the vector of influence from the semiotic to the material while we are interested in the reverse trajectory. Such a move helps us to reframe the debate between constructivism and determinism in relation to more localized processes of sense-making.

6. In February 2013, Pair bought out a rival Cupple (with a "u") and renamed themselves Couple (with an "ou").

7. Couple explicitly positions its users within the single dyad of a monogamous relationship.

8. At the time that interviews were conducted, the category of stickers (including stickers available for purchase) had only recently been implemented, and so our interviews did not

significantly address this feature. The Couple developers, however, pointed out that soon after introduction, stickers became one of the top four most popular timeline features, along with photos, texting, and Thinking of You.

9. We recognize that our sample size is small. However, our goal was not to generalize about vernacular affordances nor about practices associated with Couple overall. Rather, our intention was to explore a novel context that seemed likely to spark new ways of thinking about the relationship between practices and affordances. Accordingly, the practices we identify in our analysis should not be taken as a definitive, but rather are intended to open questions about what *other kinds* of sense-making processes may be occurring that the typical approaches to affordance can miss.

10. For example, instances of ThumbKiss use do not get posted on the timeline, and text is not included in the Moments interface—both of these interface rules are "baked in" as choices made by the designer and not configurable by users. Consequently, the interface-systems level was often harder for people who used the app to describe, although it seemed to be more easily recognized when participants moved "up" a level of scale to consider other platforms in a broader media ecology since from this vantage point they could move laterally to compare the systems-level organization of one platform to another.

11. On iPhones, Couple offers a way to initiate a FaceTime call directly from within the app.

12. Google Chat would later be replaced by Google Hangouts, but at the time of the interview, "G chat" was Rebecca's and Daniel's preferred term.

13. One possible explanation for this omission is that, as McVeigh-Schultz has argued elsewhere, systemic structures may be "covert" (Neff et al., 2012) because they are not the subject of active choice from *within* the app but rather only become choices when one goes "up" a level to consider Couple from among alternative communication platforms.

14. For example, when our interviewees described the app itself, they might move laterally to place it as a choice among alternatives in a media ecology, or at other times, they might go "down" a level to talk about interface-systems that structure (or determine) their experience. This pattern emerges again at lower levels: going "down" far enough brings us to specific interface-features, which themselves represent a range of lateral alternatives that activate the rhetorical frame of choice. Conversely, going far enough "up" brings us to infrastructure constraints like data plans and costs, which again provide "cover" as structures that are determining and not as subject to choice.

15. See McVeigh-Schultz in Neff et al. (2012) for a discussion of the ways that design mechanics can be separated into covert and overt features.

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