

Affordance out of Place: reflexive use and the designerly capacities of “users”

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Abstract

In HCI, CSCW, and related fields, the term ‘affordance’ gained purchase in the late 80s and early 90s, and paralleled a period of heightened interest in Hybrid Media Spaces and Collaborative Virtual Environments. For design researchers, these platforms accentuated differences between space (as designable structure) vs. place (as emergent within social practice). Migrating to the social sciences, ‘affordance’ now broadly accounts for the ways that online platform-features influence social practice, but such usage sometimes retains an artificial separation between space and place and, in so doing, obscures users’ own reflexive engagement with affordance. This essay rereads selected research from the 1990s in order to draw attention to the ways that users can act like designers—manipulating ‘space’ with an eye towards reshaping ‘place.’ Extrapolating to contemporary online contexts, we can similarly identify users’ own reflexive attention to affordance as increasingly key to understanding the entanglement of technological systems and social practice.

Keywords

affordance; reflexive use; space; place

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Psychologist James Gibson developed affordance theory as a way of reframing visual perception in terms of what he called ‘ecological physics.’ Later Donald Norman adapted affordance theory from Gibson’s psychology of vision to account for the ways that designed objects telegraph their action-capacities to users. Key to both Gibson’s and Norman’s formulations was an insistence on affordances as having formal properties accessible through perception.¹

In its contemporary incarnation, however, the term ‘affordance’ operates in the humanities and social sciences as a useful shorthand to account for the ways in which platforms open up, privilege, or constrain, particular actions and social practices (boyd, 2011; Hutchby, 2001; Wellman et al., 2003). In these contexts, theorists have moved away from the criterion that an affordance needs to be directly perceivable. Especially when describing interaction with digital platforms, theorists have pointed to algorithms, or digital materiality, as having certain properties which may not be immediately perceivable by those interacting with a platform. For example,

¹ “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” (Norman, 1988, p. 9). *Note:* Norman later clarifies this position, stating that he was intending to describe ‘perceived affordance’ as opposed to ‘actual affordances. However, he argues prescriptively that designers should seek to align the two (1999).

danah boyd identifies four affordances inherent to digital platforms, properties which shape networked publics: persistence, replicability, scalability, and searchability (boyd, 2011). And due to the lack of inherent visibility of these properties, users of digital platforms can sometimes stumble upon unexpected context collapse (*Ibid.*).

This framing of affordance, as inherent to systems but not necessarily accessible to perception, offers a different kind of explanatory framework than the version of affordance that Gibson, and later Norman, privileged. That said, this social science conception of affordance shares ground with a particular thread of HCI research that positions affordances as potentially hidden (Gaver, 1991; McGrenere & Ho, 2000).²

Without pre-judging one or the other notion of affordance as more or less valuable, it is nevertheless productive to unpack what gets elided when the terminology shifts in this way. If affordances can be invisible or misperceived, we can indeed account—as in boyd’s example—for unanticipated context collapse as a matter of misrecognized affordances. But given an alternative perspective that emphasizes the way affordances are inscribed as *perceivable* features of interfaces, we have a different sort of reading with a different sort of explanatory power. For instance, consider the case of Facebook’s shift from an interface that privileged ephemerality—by burying status updates behind successive page-loads—to one that foregrounded persistence in the Facebook Timeline.³ This emphasis on affordance as a perceptual category, rather than pointing to infrastructural capacities, instead underscores the ways in which Facebook’s pre-Timeline UI obscured persistence, by promoting a false sense of ephemerality.

By slipping between these two senses of affordance, we collapse important distinctions between foregrounded interface features vs. capacities of platform infrastructures. In so doing, we not only miss an opportunity to critique the ways that interfaces incentivize particular practices, but also unnecessarily privilege designers, developers, coders, etc. as those who have the exclusive ability to think about, structure, and act agentively upon affordance.⁴ And we likewise draw attention away from the ways that users themselves articulate and manipulate affordances reflexively. This oversight, I would suggest, makes us less equipped to understand the ways that technological

² Writing in 1991, William Gaver found it helpful to distinguish affordances from the perceptual information available about them (Gaver, 1991). Within this framework he identifies the notion of a *hidden affordance* in cases where little or no perceptual information is available about an affordance but a latent action-capacity is present. For example, a trap door.

³ Before Facebook’s recent shift to Timeline, users could still reach back into the history of their wall by scrolling down and loading one page increment of status-update-history after another in reverse chronological order. The affordance of this interface mechanism communicated a particular message: that contributions to Facebook were indeed persistent, but that they were also fairly buried, and that a degree of labor would be required for someone to “dig” that far back into the history of their own, or another’s, wall postings. By contrast, a view of affordance that emphasizes persistence as a *capacity* inherent to networked platforms sees Facebook’s positioning differently—i.e. from this perspective, Facebook’s status pre- and post-Timeline is *stable* with respect to the affordance of persistence.

⁴ For example, in addressing the way that hidden affordances operate in Gaver’s (1991) conception, the following argument could be posed: The notion of a “hidden” affordance assumes a designer who has preconceptualized model of use and intentionality. It also sets up an ideal user who does not tinker with their environment, nor engage with objects in an exploratory fashion, but rather experiences action-capacities as knowable through perception—a legacy the Gibson’s (1977) original model and its privileging of the ocular. In “the wild,” however, we know this scenario to be suspect, both in terms of material affordances of objects as well as in terms of digital platforms. Humans learn about affordances not only by perceiving objects and interfaces but by manipulating them. And it is this emergent quality that McGrenere and Ho (2000) elaborate upon. Especially when affordances are contingent upon an intermingling of technical infrastructure and inter-subjective practices, then, we need alternative modes of attending to users’ own designerly capacity to tinker, probe, and reimagine the relationship between formal structure and practice.

systems and social practices become entangled. For example, twitter features like @reply, retweet, and hashtag were all initially invented through emergent practice (that in many cases migrated into twitter via IRC) long before analogous digitally supported affordances were introduced by Twitter's developers. This trajectory (from practice to platform) upends the privileged status of designers as uniquely able to conceptualize new models of use.

The tendency to emphasize affordance as the domain of the designer/developer parallels distinctions between space (as designed structure) and place (as lived practice) that emerged in HCI and CSCW research on hybrid and virtual spaces. By revisiting this literature, we can start to imagine an alternative reading of the relationship between structure and practice which positions users as actors grappling reflexively with affordance.

In a much cited article in *Computer Supported Cooperative Work* titled "Re-place-ing Space: The Roles of Place and Space in Collaborative Systems," Steve Harrison and Paul Dourish (1996) make distinctions between the abilities of designers to structure collaborative spaces vs. the understood social reality of those spaces (designated as 'place'). Building on research by Gaver (1992) that called attention to the collaborative affordances of Hybrid Media Spaces, the tagline that emerged out of Harrison and Dourish's essay was that "Space was the opportunity" and "while Place was the shared understanding." More importantly for this discussion, they also pointed to limitations that they saw in designers' abilities to design place. In other words, they felt that designers could structure the geometry of *space*, but they didn't have control over the ways that lived practice laminated a shared sense of *place* onto that designed space.

This position about the non-designability of place emerged from observations about Hybrid Media Spaces and Collaborative Virtual Environments (CVEs). Hybrid Media Spaces were experimental platforms that supported remote audio-visual communication—and might now be recognized as something akin to a proto-Skype technology. Collaborative Virtual Environments were platforms for remote participants to experience a shared 3D immersive environment (predecessors to today's multiverses). For both CVEs and Hybrid Media Spaces, there was a sense of discovery about the new forms of social practice facilitated by these systems, but it was coupled with a healthy dose of modesty about the limits of control that designers had over the sorts of emergent "placeness" that they were witnessing. In other words, lived practices within these systems evolved with a great deal of independence and were not entirely predictable based on choices the designers made about how to structure these new social environments.

So while one of Harrison and Dourish's initial questions for this research was: how do we make spaces into places? Their take-away from design research on Hybrid Media Spaces was that "Placeness is created and sustained by patterns of use; it's not something we can design in" (1996, 70). What they meant is that "CSCW tools and technologies create *new* social places, based on the ways in which their users ascribe new social meanings to new technological features" (*Ibid.*, 71).

However, Harrison and Dourish also hint at the ways in which users of Hybrid Media Spaces *themselves* conceived of and self-consciously manipulated affordances of space. In one particular example, they note a key decision by one of the users of a Hybrid Media Space to rotate an ambient video camera 180 degrees so that it would be oriented towards an office door. This repositioning altered the sense of place considerably by, for example, prompting novel greeting rituals with remote participants (on camera) when a physically located subject entered or passed by the office. While the act of moving the camera 180 degrees isn't framed by Harrison and Dourish as an act of design, but by recognizing it as such, we can start to understand creative acts of "use" as inherently engaged with space and structure in ways that Dourish and Harrison

privilege as the exclusive domain of design expertise. Such manipulation, like opening or closing a door or window, all represent new configurations of what Ito and Okabe have described as the technosocial situation (Ito & Okabe, 2005).

To think of this action within a design framework, we could pose the question: in what context did the camera's redirection affordances, and their impact upon place, become activated through particular discoveries of use? Such questions complicate boundaries between designers and users as well as between space and place. The affordances of a system, when attended to through novel forms of practice, can be available for reflexive reconfiguration—becoming what Bruno Latour has described as “matters of concern” (Latour, 2008). And it is in this sense that I propose the term ‘reflexive use.’

In conclusion, by collapsing the differences between ‘affordances’ as infrastructural capacities vs. ‘affordances’ as perceivable interface features, we undervalue the reflexive capacities of users-as-actors and miss an important opportunity to hone an alternative analytical vocabulary—one that could trace how practice engages with affordance dynamically. Within such a framework, affordances would not be positioned stably as ‘hidden’ or ‘perceived,’ but rather dynamically as more or less available for reflexive use.

References:

- boyd, danah. (2011). Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications. In ed. Z. Papacharissi (Ed.), *Networked Self: Identity, Community, and Culture on Social Network Sites* (pp. 39–58). Taylor & Francis.
- Gaver, W. (1991). Technology Affordances. *ACM*.
- Gaver, W. (1992). The Affordances of Media Spaces for Collaboration. *Proceedings of the 1992 ACM conference on Computer-supported cooperative work - CSCW '92*, 92, 17–24.
- Gibson, J. (1977). The Theory of Affordances. In R. Shaw & J. Bransford (Eds.), *Perceiving, Acting and Knowing: Toward an Ecology of Psychology*. Hillsdale, New Jersey: Lawrence Erlbaum Assoc.
- Harrison, S., & Dourish, P. (1996). Re-Place-ing Space : The Roles of Place and Space in Collaborative Systems. *Proc. ACM Conf. Computer-Supported Cooperative Work CSCW'96 (Boston, MA)*. New York: ACM.
- Hutchby, I. (2001). The Communication Affordances of Technological Artefacts. *Conversation and Technology: from the telephone to the internet*. Malden, MA, USA: Blackwell Publishers.
- Ito, M., & Okabe, D. (2005). Technosocial Situations: Emergent Structures of Mobile Email Use. In M. Ito, D. Okabe, & M. Matsuda (Eds.), *Personal, Portable, Pedestrian*. Cambridge, MA: MIT Press.
- Latour, B. (2008). A Cautious Prometheus? A Few Steps Toward a Philosophy of Design (with Special Attention to Peter Sloterdijk). *Design History Society* (p. 2). Universal-Publishers.
- McGrenere, J., & Ho, W. (2000). Affordances : Clarifying and Evolving a Concept. (M. M, Ed.) *Interface*, 177(May), 1–8.
- Norman, D. A. (1988). *The Design of Everyday Things*. New York: Basic Books.
- Norman, D. A. (1999). Affordance, conventions, and design. *Interactions*, 6(3), 38–42.
- Wellman, B., Quan-Haase, A., Boase, J., Chen, W., Hampton, K., De Diaz, I. I., & Miyata, K. (2003). The Social Affordances of the Internet for Networked Individualism. *Journal of Computer-Mediated Communication*, 8(3), 0.