

Online Communities and the Affordances of Anonymity

Jessica L. Beyer
University of Washington
U.S.A.
jlbeyer@uw.edu

Abstract

In many cases the affordances of an online space have a crucial role in creating the “shape” of an online community including the adoption of cultural norms based on the structural restrictions of a given space. What then becomes a driving factor in producing outcomes—the structure of a technological space, the guiding principle of a cultural value, or the agency of actors? Anonymity in online communities offers a useful lens to explore questions about affordances and online communities, in particular, in relation to political mobilization. This paper is an attempt to articulate how the intricacies of anonymity can generate different types of political outcomes.

Keywords

affordance; anonymity; political mobilization; online communities

Online Communities and Affordances of Anonymity

In many cases the affordances of an online space have a crucial role in creating the “shape” of an online community including the adoption of cultural norms based on the structural restrictions of a given space. What then becomes a driving factor in producing outcomes—the structure of a technological space, the guiding principle of a cultural value, or the agency of actors? Anonymity in online communities offers a useful lens to explore questions about affordances and online communities, particularly in relation to political mobilization. This paper is an attempt to articulate how the intricacies of anonymity can generate different types of political outcomes.

As an affordance of online spaces, anonymity is a component that crosscuts research agendas, theoretical discussions, design choices, and policy debates. Indeed, anonymity is often considered in causal terms and discussed in relation to the outcomes that it fosters. Further, it is frequently framed in relation to its benefits or consequences. For good reason, as anonymity has a profound impact on what users do in a given space, what users feel they can do, and the types of communities that appear.

Many scholars have observed the affordances of anonymity in relation to the varied Anonymous groups (e.g. Beyer, forthcoming; Coleman, 2012; Knuttila, 2011; Norton, 2011; Phillips, 2012; Sauter, 2012; Simcoe 2012). In the case of Anonymous, the anonymity built into the structure of Anonymous’ birthplace, 4chan.org, not only kept users from developing identities but also became internalized as a community value and maintained once participants left the space (Beyer, forthcoming; Simcoe, 2012). In addition, successful website creators Mark Zuckerberg (Facebook) and Christopher Poole (4chan), have debated the benefits and drawbacks of online anonymity, with each articulating a different set of affordances attached to “public-ness” (Kirkpatrick 2010: 199) or anonymity (Poole, 2011). For example, in a speech in 2011, Poole asserted that the anonymous nature of 4chan.org allowed a contributory culture to flourish in a way that sites without anonymity did not saying, “Anonymity is authenticity. It allows you to share in a completely unvarnished, raw way.” The popular press has created boogeymen in online spaces where child predators and highway robbers “dressed” as women lurk while other research has shown that anonymity or pseudo-anonymity protects activists (e.g. Howard and Hussain, 2011).

However, how much agency should we ascribe to a single technological attribute of an online community space? Drawing data collected during comparative ethnographic research in a variety of

highly populated online communities, I focus on three aspects of anonymity and political mobilization here. First, often anonymity is divided into three categories—anonymity, pseudo-anonymity, and “non-anonymity”—but these categories do not necessarily capture the nuances of what anonymity means in a given online space. Thus, to articulate “anonymity” online I inductively created a set of criteria for coding online communities and produced a continuum of anonymity. For example, while many would consider most of 4chan.org to be a completely anonymous online community, the site administration tracks users’ IP addresses. In contrast, *World of Warcraft* players are pseudo-anonymous (i.e. aliased) as people use names distinct to that space. Nevertheless, layers of reputation based on traceable behaviors, group membership, and other factors including Blizzard’s behavior tracking mean users are known, particularly within their own sub-communities.

Second, I then apply this continuum to questions of what types of affordances foster political mobilization in online communities. Peculiarly, my research has indicated that the more regulated and the more known users are, the less likely they are to mobilize politically. As part of my findings, I argue that in online spaces where there are high levels of anonymity and low levels of formal regulation, it is more likely that conflicts with offline behavioral norms will emerge and with it, political mobilization. The structural restrictions placed upon users by websites can generate a culture of anonymity in which anonymity becomes a value that is policed and considered a defining community feature. In such spaces, users that break the norm of anonymity, particularly for their own glorification, are punished for their transgression. Anonymous and 4chan are obvious examples of this, but this concept is embedded in the norms of other online communities such as Reddit where it is a formal site rule and also a community norm to refrain from posting personal information. These findings indicate that the affordances of an online space have a fairly significant impact on the types of behaviors that emerge from the space.

Finally, I assert that once internalized as a value, anonymity is drawn upon to pursue particular types of outcomes using particular types of strategies. As scholars such as Earl and Kimport have argued: “That a technology such as a computer or the Web *can* offer an affordance doesn’t really matter unless *people* leverage that affordance” (Earl and Kimport, 2011: 33). Using Anonymous as an “easy case” to test this, it has appeared that the community value of anonymity has reinforced political strategy choices. In Anonymous produced videos, texts, and websites, anonymity is clearly identified as a valuable attribute of Anonymous. Organizational forms that flow from anonymity, such as lack of hierarchy, are also identified as strengths. In addition, all of the following articulated ideas are associated with anonymity: there is strength in numbers, the whole is more powerful than the individual, and the collective does not represent any individual voice, but rather an idea whose time has come. As a video from 2008 states, “We have no leaders, no single entity directing us – only the collective outrage of individuals, guiding our hand in the current efforts to bring awareness” (ChurchOfScientology, 2008). Thus, while there are functional reasons for the choice to wear a mask at “real life” protests—such as to maintain anonymity to avoid retribution from Church of Scientology officials—and reasons for maintaining anonymity online—such as avoiding law enforcement—these choices also are related to the value placed on anonymity.

In conclusion, when considering my research in relation to the concept of affordances a murkier picture appears than one that can be simplified into a consideration of the structure versus agency. The “geography” of online communities do structure behaviors, but “the rules” and individuals are inherently engaged in mutually transformative relationships (Migdal, 2001: 254).

References

- Beyer, J. L. (forthcoming). *Expect Us: Online Communities and Political Mobilization*. New York, NY: Oxford University Press.
- ChurchOfScientology. (2008). Call to Action. YouTube. January 27, 2008. Retrieved from <http://youtu.be/YrkchXCzY70>

- Coleman, G. (2012). Our Weirdness is Free, The Logic of Anonymous—online army, agent of chaos, and seeker of justice. *Triple Canopy*. January 2012. Retrieved from http://canopycanopycanopy.com/15/our_weirdness_is_free
- Earl, J. and Kimport, K. (2011). *Digitally Enabled Social Change: Activism in the Internet Age*. Boston: MIT Press.
- Howard, P.N. and Hussain, M. (2011). The Role of Digital Media. *Journal of Democracy* 3(22): 35-48.
- Kirkpatrick, D. (2010). *The Facebook Effect: The Inside Story of the Company that is Connecting the World*. New York, NY: Simon & Schuster.
- Knuttila, L. (2011). User Unknown: 4chan, anonymity, and contingency. *First Monday* 16(10). Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3665/3055>
- Migdal, J. (2001). *State in Society: Studying How States and Societies Transform and Constitute One Another*. Cambridge: Cambridge University Press.
- Phillips, W. (2012). The House That Fox Built: Anonymous, Spectacle, and Cycles of Amplification. *Television & New Media*. Retrieved from <http://tvn.sagepub.com/content/early/2012/08/27/1527476412452799>
doi: 10.1177/1527476412452799
- Poole, C. (2011). Keynote Speech, SXSW. March 13, 2011. Retrieved from http://schedule.sxsw.com/2011/events/event_IAP000001
- Norton, Q. (2011). Anonymous 101: Introduction to the Lulz. *Wired Magazine: Threat Level*. November 8, 2011. Retrieved from <http://www.wired.com/threatlevel/2011/11/anonymous-101/all/>
- Sauter, M. Guy Fawkes Mask-ology. *HiLoBrow*. April 30, 2012. Retrieved from <http://hilobrow.com/2012/04/30/mask/>
- Simcoe, L. (2012). *The Internet is Serious Business: 4chan's /b/ board and the lulz as alternative political discourse on the internet*. M.A. Thesis, Ryerson University.

License

This article is ©2013 Jessica L. Beyer, and licensed under CC BY-NC-ND

Technology as virus: Using biological metaphors to talk about determinism

Miles C. Coleman
Gina Neff
University of Washington,
Seattle

Abstract

This paper argues that the best way to understand “determinism” is to reformulate the idea that technology and human sociality constitute a dynamic interplay. Contrary to the idea that this interplay is symmetrical, however, the authors argue that this interplay is best understood as inherently asymmetrical. Using the metaphor of a virus, the authors question whether the “agency” of technology necessarily needs to imply the same kind of agency that human actors imply.

Keywords

technological determinism; metaphor; science and technology studies; agency

Technology as virus: Using biological metaphors to talk about determinism

The challenges for STS remain: to understand how machines make history in concert with current generations of people; to conceptualize the dialectical relationship between the social shaping of technology and the technical shaping of society; and to treat them symmetrically the categories of analysts and those of actors even in if the latter includes technological determinism, anathema to so much contemporary scholarship in the humanities and social sciences. –Sally Wyatt

Today, nearly six years following Wyatt’s (2008) bold admonition to scholars of science and technology, we still find that the “monster under the bed” that is technological determinism is still being ignored. Perhaps we think that if we put our heads under the covers it will eventually go away, freeing us of the oppressive aura that it brings. But the fact remains, ignoring something as persistent as technological determinism won’t make it go away. If anything, leaving it unwatched leaves us vulnerable to its potential violences, and unaware of any beneficence it might have.

There are certainly conversations that critique this lack of awareness head-on (e.g., [Neff, Jordan, McVeigh-Sculz, 2012](#)), stating that while we may have come to understand the relationships between technologies and users in more complex and sophisticated ways, we nonetheless tend to focus most hardily on the “social shaping” side of Wyatt’s (2008) abovementioned symmetrical structure, leaving “technological shaping” under-theorized. In an effort to continue this conversation, it will be argued that the *symmetry* that is so central to Wyatt’s vision of how STS scholars should approach determinism can be constructively reformulated to allow for a more dynamic relationship between users and technologies, not as elements in balance, but rather as entities that contingently negotiate agency based on asymmetrical contextual particulars much the same as when a meets a host. The host might get sick, it might keep the contagion at bay, or, it might even benefit from the entity’s presence, depending on the contextual elements that surround the instance of interaction, *not necessarily the interaction itself*. Using context to define how agency is actualized allows space to attribute agential influence to either technical or social influences, depending on the instance in which the interaction occurred. Sometimes we make our own decisions; other times, our decisions are made for us. Biotic metaphors help us deal with this reality by animating technology as something that can, in fact, possess agency.

Metaphors work enthymematically, by asking the reader to “fill in the blank,” to “carry over” the meaning of the vehicle (*bios*) to the tenor (technology) based on the communal information available

to him or her. As a result of such an enthymematic reformulation of vehicle and tenor, a new understanding of the terms is yielded (Burkholder & Henry, 2009). The complexities and contingencies we commonly associate with living life day-to-day, amidst a world inundated with other non-static, animated life forms describes the connotations this work hopes to transfer to technical agency, and our (human) relationship to it.

For Thomas & Wyatt, (1999), the metaphors we choose to describe the relationships between technology and users have "a normative dimension; they can be used to help the imaginary become real or true"(p. 695). Exploring specific biotic metaphors can help to create a useful taxonomy for dealing with determinism in increasingly dynamic ways. Though not exhaustive of all possibilities of *bios*, one particularly potent biotic relationship between technology and society will be discussed in this paper: Virus.

Technology as Virus

The notion that a nearly lifeless modicum of proteins can confiscate and re-appropriate the reproductive functions of a living cell so as to repeatedly, and rapidly, self-replicate to the point of evolutionary mutation, all the while interrupting the normal processes of that cell, brings a foreboding sense of unpredictability. Just as the influenza virus can keep a person in bed, technology *as virus* can affect the choices people are able to make.

J. Macgregor Wise (1998) helps draw out this deterministic relationship rather well when he depicts technical agents as not possessing a will like a human, or even a cat, or a dog would, but rather an "effectivity" upon those beings that do possess a will. Just like a virus, integrated into the workings of a cell, injecting and reproducing its influence upon that cell. Technology as virus does not *act per se*. Rather, it effects action in such a way as to continually reproduce the effect. For instance, as communication technologies evolve, personal information is made more easily accessible, creating concern for users in the form of "information privacy" (Belanger & Crossler, 2011). Communication technologies' introduction to the host cell of society has created a self-replicating producer of information privacy concern. Every new operating system, advance in social media, or portable computing device has depended upon the developments that preceded it; one would think that designing a "smart" phone is a complicated endeavor, easily facilitated by the use of other information technologies, for example. Within each technological development is an established framework of privacy concern, say the difference between computer viruses in email attachments and the remote identity theft that can happen on "smart" phones. Within each of these frameworks is an established set of "entrenched norms.... key social interdependences, as responsible for its features, function, and impact" (Nissenbaum, 2010, pp. 4, 5). The creation of many new technologies is determined by the concern for information privacy; the concern for information privacy is perpetuated by the creation of communication technologies—like a virus reproducing itself in the host cell of the social.

The agency of the host cell can exist independently of a virus. Nonetheless, when a virus is introduced to the host cell that actualization of agency is reconfigured in such a way as to require negotiation with the virus. The host cell's decisions become the host cell/virus' decisions. To explain, we'll visit Balsamo's (2011) conceptualization of "intra-actions," which describe agency that is actualized in the opening between the embedded agency of the technical and the expressive agency of the social. An example of this can be drawn from Mackenzie's (2007) "machine time," the "different timings attached to contemporary computing and information technologies" (p. 89). The actualization of a user's agency when using a communication technology is not necessarily the product of a user socially constructing the keyboard under their fingers, or the email software meeting their eyes on a screen. Rather, the actualization of a user's agency is the product of the circuit inlays of the keyboard, the keyboard's key matrix and keymap interacting with the input/output system of the computer, which interacts with the transmission control protocols that allow the computer to connect to an email service, which interacts with the coding of the email service, which interacts with the political, aesthetic, and scientific values and beliefs of the user. The matrices that exist along these nodes of

connection influence the user in varied and unbalanced ways, which effect the agential outcomes of the interaction—just like a virus infecting a cell effects the processes that the cell can carry out.

Conclusion

The dynamics inherent to “living” make biotic metaphors useful for animating analysis of agential outcomes. Technology as virus has been discussed to show that determinism can occur asymmetrically between social and technical entities.

References

- Balsamo, A. (2011). *Gendering the Technological Imagination* (pp. 27-50). Durham, NC: Duke University Press.
- Belanger, F., & Crossler, R. E. (2011). Privacy in the digital age: A review of information privacy research in information systems. *MIS Quarterly*, 35(4), 1017-1041.
- Burkholder, T. R., & Henry, D. (2009). *Criticism of metaphor*. Lanham, MD: Lexington Books.
- Mackenzie, A. (2007). Protocols and the irreducible traces of embodiment: The viterbi algorithm and the mosaic of machine time. In R. Hassan & R. E. Purser (Eds.), *Time and temporality in the network society* (pp. 89-105). Stanford: Stanford University Press.
- Nissenbaum, H. F. (2010). *Privacy in context: Technology Policy, and the integrity of social life*. Stanford, CA: Stanford University Press.
- Thomas, G., & Wyatt, S. (1999). Shaping cyberspace: Interpreting and transforming the internet. *Research Policy*, 28(7), 681-698.
- Wyatt, S. (2008). Technological determinism is dead; Long live technological determinism. In E. J. Hackett, O. Amsterdamska, M. Lynch & J. Wajcman (Eds.), *The handbook of science and technology studies* (3rd ed., pp. 165-180). Cambridge, MA: MIT Press.
- Wise, J. M. (1998). Intelligent agency. *Cultural Studies of Science and Technology*, 12(3), 410-428.
- Wyatt, S. (2008). Technological determinism is dead; Long live technological determinism. In E. J. Hackett, O. Amsterdamska, M. Lynch & J. Wajcman (Eds.), *The handbook of science and technology studies* (3rd ed., pp. 165-180). Cambridge, MA: MIT Press.

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

Joshua McVeigh-Schultz
University of Southern California,
Media Arts and Practice, School of Cinematic Arts
jrmcveig@usc.edu

Abstract

In HCI, CSCW, and related fields, the term ‘affordance’ gained purchase in the late 80s and early 90s, during 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 technical systems and social practice.

Keywords

affordance; reflexive use; space; place

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

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, 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

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).

thread of HCI research that positions affordances as potentially hidden (W. 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 for misperceived affordances and, for example, unanticipated context collapse in digital platforms. But given an alternative perspective that emphasizes the way affordances are inscribed in 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—to one that foregrounded persistence in the Facebook Timeline.³ This version of affordance, rather than emphasizing infrastructural capacities, instead underscores the ways in which Facebook's UI initially promoted a false sense of ephemerality.

By collapsing these two senses of affordance, we collapse important distinctions between foregrounded interface features vs. the obscured capacities of platform infrastructures. In so doing, we perhaps unnecessarily privileges designers, developers, coders, etc. as those who have the exclusive ability to think about, structure, and act agentively upon affordance, and likewise draw attention away from the ways that users themselves articulate and manipulate affordances reflexively. And this oversight, I would suggest, also makes us less equipped to understand the ways that technical systems and social practices become entangled. For example, twitter features like @reply, retweet, and hashtag were all initially invented through emergent practice 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) grapple with distinctions that had become apparent in the 1990s between the abilities of designers to structure collaborative spaces vs. the understood social reality of those spaces, which Harrison and Dourish

² Writing in 1991, William Gaver found it helpful to distinguish affordances from the perceptual information available about them (W. Gaver, 1991). Within this framework he identifies the notion of a *hidden affordance*, in cases where no perceptual information is available about an affordance but a latent action-capacity is present. I would argue here that the notion that an affordance is “hidden” suggests some other being could independently verify it or intend it (know of its existence) without being positioned as a “user.” In other words, the notion of a “hidden” affordance assumes a designer who has preconceptualized a model of use. It also assumes an ideal user who does not tinker with their environment, nor engage with its properties in an exploratory fashion, but rather experiences objects' action-capacities as knowable through perception. 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. 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. In this sense, affordance, as in Gibson's original formulation, is not exclusively defined by the properties of a system but rather by the relationship between an organism (human) and its environment. And as such, affordances can be pliable, emergent, or tinkerable properties of systems.

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 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.

refer to 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 determine place. In other words, they felt that designers could structure the geometric and mediated features of *space*, but they didn’t have complete 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 largely from their work with Hybrid Media Spaces and Collaborative Virtual Environments. Hybrid Media Spaces were experimental platforms that supported remote audio-visual communication—and might now be recognized as something like a proto-Skype experience. Collaborative Virtual Environments (CVEs) 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” (Ibid: 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.”

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 their camera 180 degrees. This change ensured that the ambient video camera was directed now towards the office door, a change that the authors acknowledged actually altered the sense of place considerably by, for example, prompting novel greeting rituals with remote participants when a physically located subject entered or passed by the office. Importantly, the role of the participant who moved the camera 180 degrees wasn’t framed as an act of design. But 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 mobility and redirection affordances become activated through particular discoveries? Within Harrison and Dourish’s example, the movement of the camera could be reinterpreted as an act of design that reshapes the relationship between space and place. In this sense the affordances of a system, when attended to, can be available for reflexive reconfiguration—becoming what Bruno Latour has described as “matters of concern” (Latour, 2008). By framing an affordance as *either* actual *or* perceived, 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 geometries of practice entail new affordances and move dynamically between categories of “hidden” and “perceived.”

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.
- 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*. 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.

Affordance as a metaphor for power

Sam Srauy

Temple University,

Media and Communication, School of Media and Communication

ssrauy@temple.edu

Abstract

The theory of affordances is often used in Internet studies. However, the concept has undergone drastic changes since its original inception. Without taking a firm stance one way or another regarding the veracity of Gibson's theory, the author argues that the continuous shift away from its original use warrants a reconsideration of the theory. The author concludes that the idea of affordances is better suited as a metaphor for power than a theoretical lens in its own right. Employing a Foucauldian lens, I reexamine what have been understood as affordances as articulations of power relations in human society. The paper addresses whether or not social agency ought to be given more consideration if we do assume affordances exist. By contrasting the theory of affordances with other competing theories, the author unpacks these implications, readdresses earlier critiques of affordances, and offer a potential alternative that might prove useful.

Keywords

power; discourse; affordance; metaphor

Critiques that came before

Martin Oliver (2005) questions the concept of affordances and highlights its theoretical problems. Specifically, Oliver (2005) points out that the way the theory has been used is a wide departure from Gibson's (1977) original conception. Of course, this does not imply that the way affordances have been used in internet studies is invalid or not useful. Rather, I argue there needs to be some theoretical re-evaluation so that we may clearly see where problems lie and address them. To do so, this short paper highlights objections to affordances and address them. Namely, I argue that the concept of affordances is better served by using Foucault's characterization of discourse. I do not wish to dismiss affordances outright, however. Therefore, I argue affordances are most useful metaphors that describes the power relationship between humans and objects.

Gibson's affordance and Norman's interpretation

For James Gibson (1977), affordances are cues inherent to an object that a creature sees and take advantage of. As Oliver (2005) rightly points out, the key for Gibson is that these cues are present in the natural environment and that the creature sees it (e.g., Coss & Moore, 1990). Gibson, after all, is a perceptual psychologist (O'Neill, 2008; Oliver, 2005). He was concerned with how a creature *perceives* these cues (Oliver, 2005). Of course, humans can perceive in different ways than merely sight. Yet Gibson's writings implies that seeing these affordances is paramount (Gibson, 1977; Oliver, 2005). Oliver (2005) points out that this emphasis on visual perception in the natural environment is telling because of the time period in which he wrote. Gibson wrote during a wave of positivist thinking and was committed to positivism (Oliver, 2005). Gibson's inclusion of the creature's agency was apparently trying to address social constructivists' criticism of positivism.

Gibson's argument carves out a couple of "safe spaces" for both positivist and constructivist. First, Gibson (1977) argues that there is a fundamentally real physical cue that potentially permits a particular series of uses. Second, what use is chosen depends on the creature who uses it (Coss & Moore, 1990; Gibson, 1977; O'Neill, 2008). The creature and the object, in a sense, co-construct their relationship to each other. If that's the case, then that means this relationship is limited to objects in the environment that pre-exist human influence (Oliver, 2005). Objects that are created by humans, by necessity are an articulation of human intent. Therefore, a downed tree might be used as building

material for a table. But, to say a table affords anything is problematic because a table already is an articulation of human will regardless of how that table is ultimately used.

Fast forward several years and Gibson's theory is rearticulated by Donald Norman (2002). Norman takes the theory and applies it to human designed objects. For Norman (2002), this move seems to be intended to center the end-user's perception of the object. In effect, Norman favors human perception over the object; whereas, Gibson treated the object and perception as having equal influence. I suspect Norman's intention is to carve a space for technology (and other objects of *human design*) to have an influence on the user. This is Norman's so-called user centered approach. If we take Norman's and Gibson's intention as an attempt to "make peace" between positivism and social constructivism (Oliver, 2005), then Norman version of affordances is indeed compatible with Gibson's—but only to an extent. The questions become: Is Norman's rearticulation of Gibson's theory of affordances successful? In Norman's conception, can a human created object "speak"? Or, do we abandon it altogether?

Is Norman successful?

I do believe that Norman's rearticulation is successful. But the rearticulation is successful as a metaphor for humans' relationship to their environment. In some of the ways that the theory of affordances has been used, other theoretical lenses are more appropriate.

Dissatisfied with how affordances has been used in their field, Wright and Parchoma (2011) turned to actor-network theory (ANT) to explain how technology is used in education. In many ways, ANT is a better theoretical alternative because it argues that humans and their environment (inclusive of technology) ought to be considered as a heterogeneous network in which each part disciplines the others (Wright & Parchoma, 2011). Therefore, any analysis must employ a symmetric analysis of humans and their technologies (Wright & Parchoma, 2011). In short, ANT satisfies our observation that our technologies do exert some influence on us. Yet, where ANT may fall short is that by insisting on a symmetric analysis, it grants objects the same level of influence as humans. But, if we are talking about technology, embodied in the objects themselves are the influences of humans. Whether I sit at or stand on a table may be my choice. But, in the design of a table, there already is a presupposition that I *should* sit at the table. Thus, designed objects "speak" only the words of their designers.

Another argument is that affordances may be nothing more than symbols in the symbolic interactionist sense. Lee Humphreys postulated this possibility at AoIR 13. Yet, as I examine the literature, it is not an argument that seems to be explicitly advanced. However, I believe her observation is quite important for a couple of reasons. First, as my colleagues on this panel suggest, the social does seem to hold more weight than objects if these things called affordances do exist. Second, Humphreys' observation seems to be reflected indirectly in the literature. For example, one study observes that affordances mean very little without a common cultural framework from which to draw understanding (Oshlyansky, Thimbleby, & Cairns, 2004). Another study argue that affordances *arise from* social interaction (Vyas, Chisalita, & Van Der Veer, 2006). By arguing for a user centered design, Norman is also indirectly arguing this. And, indeed, those arguments suggests we learn the "meanings" of these technologies and how we use them from our interaction with others. The "voice" of technology is the voice of the designer as well as users in the social world. Future studies should investigate this possibility.

Speaking through the designer: Affordance as a metaphor for power

There is another possibility. Oliver's (2005) article suggests that one useful alternative is Foucault's (1981) conception of discourse as articulations of meaning and power relations. Foucault (1981) points out that practices and objects (i.e., discourse) concretize meanings and power relations. While Oliver (2005) ultimately adopts another answer without explaining why, I believe that discourse in a Foucauldian sense is more appropriate. Again, what's important is that when we speak of affordances,

we are assuming that objects have an “agency” and affect humans that use them. Designers and culture are answers, but power relations is a better answer because the concept illustrates the sometimes coercive ebb and flow of meaning making that makes technology *appear* to have agency. Humans speak, power is concretized, and humans rearticulate power continuously.

But does that mean affordances ought to be abandoned wholesale? I do not think so. I think the reason affordances have such staying power is precisely because it helps us see how technology affect our relations to them. Affordances persists because it is a powerful metaphor. Foucault’s discourse is an abstract one. By situating power relations as affordances, we can see this abstraction clearly. Gibson’s attempt to carve out a space for positivism as it was being threatened by social constructivism takes a powerful metaphor and shackles it in an attempt to address criticisms. As a metaphor for Foucault’s discourse, Norman’s appropriation of affordance frees it to be used in a more understandable.

References

- Coss, R. G., & Moore, M. (1990). All that glistens: Water connotations in surface finishes. *Ecological Psychology*, 2(4), 367–380. doi:10.1207/s15326969eco0204_3
- Foucault, M. (1981). The order of discourse. In R. Young (Ed.), *Untying the Text: A post-structuralist reader* (pp. 51–78). Boston: Routledge & Kegan Paul Ltd.
- Gibson, J. (1977). The theory of affordances. In R. Shaw & J. Bransford (Eds.), *Perceiving, acting, and knowing: toward an ecological psychology*. New York: Lawrence Erlbaum Associates.
- Norman, D. A. (2002). *The Design of Everyday Things* (First Edition.). Basic Books.
- O’Neill, S. (2008). Affordance: A case of confusion. In *Interactive Media: The Semiotics of Embodied Interaction* (2009th ed.). Springer.
- Oliver, M. (2005). The problem with affordance. *E-Learning*, 2(4), 402. doi:10.2304/elea.2005.2.4.402
- Oshlyansky, L., Thimbleby, H., & Cairns, P. (2004). Breaking affordance: Culture as context. In *Proceedings of the third Nordic conference on human-computer interaction* (pp. 81–84). ACM.
- Vyas, D., Chisalita, C. M., & Van Der Veer, G. C. (2006). Affordance in interaction. In *Proceedings of the 13th European conference on cognitive ergonomics: trust and control in complex socio-technical systems* (pp. 92–99). ACM. Retrieved from http://scholar.google.com/scholar?q=related:XTeRmfKyylYJ:scholar.google.com/&hl=en&as_sdt=0,39
- Wright, S., & Parchoma, G. (2011). Technologies for learning? An actor-network theory critique of “affordances” in research on mobile learning. *Research in Learning Technology*, 19(3), 247–258. doi:10.1080/21567069.2011.624168

License

This article is ©2013 Sam Srauy, and licensed under CC BY-NC-ND.