

The Death of Virtuality

A Proposal for the Resolution of an Internet Research Conundrum

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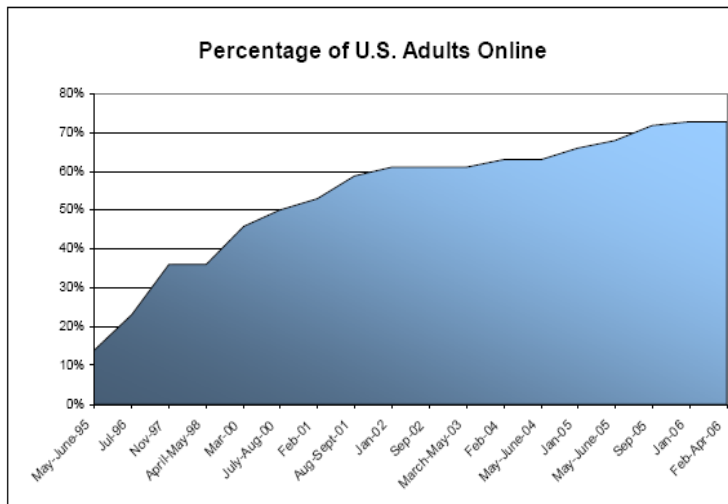
Early metaphors to describe the internet painted a picture of a lawless frontier where entrepreneurial, aggressive and adventurous settlers could stake out a claim and reap the bounty. Howard Rheingold (1993), wrote of “imaginary” space and “virtual” communities in his classic work *The Virtual Community: Homesteading on the Electronic Frontier*. It was he that first ascribed the term ‘virtual’ to activities on the Internet.

Does the construct of “virtual” color the observations of scientists and scholars by suggesting that behavior in netspace is different from or possesses significant differences from that which occurs in milieus other than the Internet. As Benjamin Whorf suggests, “an accepted pattern of using words is often prior to certain lines of thinking and forms of behavior.” Or as Sapir (1929) suggests that the, “Language habits of our communities predispose certain choices of interpretation.”

The Pew Internet Project (2006) recently indicates that 73% of adults in the United States are connected to and regularly use the Internet. (See Figure 1). More importantly they report that:

- The share of online Americans who say the internet has greatly improved their **ability to shop** has doubled—from 16% to 32%—since March 2001.
- The share of online Americans who say the internet has greatly improved the **way they pursue hobbies and interests** has grown to 33%, up from 20% in March 2001.
- The share of online Americans who say the internet has greatly improved their **ability to do their job** has grown to 35%, up from 24% in March 2001.
- The share of online Americans who say the internet has greatly improved the **way they get information about health care** has grown to 20%, up from 17% in March 2001. Pew (2006)

Figure 1



Source: Pew Internet & American Life Project Surveys, March 2000-April 2006. All surveys prior to March 2000 were conducted by the Pew Research Center for People & the Press.²

Can we still consider activities conducted on the Internet to be ‘virtual’ when 73%, of a given population, use it in their daily lives? Is that not the norm? Isn’t it likely that the Internet, as a tool of communication, will soon be as ubiquitous as the telephone or electric power?

The term virtual is a concept applied in many fields with somewhat differing connotations, and denotations? In common usage, 'virtual' has a similar meaning to 'quasi-' or 'pseudo-' (prefixes which themselves have quite different meanings), meaning something that is almost like something else." *Wikipedia*

A contemporary philosophical definition of ‘virtual’ allows the separation of effects from the generative object. i.e. Real effects can be issued by virtual objects so that our perception of it and our whole relation to it are fully real¹ Berthier (1985). Arguably, what appears on a computer screen may be ‘virtual’, but the cognitive state of the user is not; just as what you see in a mirror is not real but your perception is a cognitive reality? Distortions are recognized as aberrations, but not an alternate reality i.e. a ‘virtual’ perception.

¹ “what, without being real, has qualities of reality, with force and in a fully current way - i.e not potential”

The characterization of Internet activities as 'virtual' has become 'doxa'², to both the scholarly and lay communities. A search using the term 'virtual' and 'Internet' on <http://scholar.google.com> retrieves 546,000 internet research pages and articles that use this construct. The same search of the archives of the online journal, *First Monday*, contains 70 papers with the lowest matching score of 50%.

By example, several decades have passed since Sears Robuck printed a general catalogue. In its day, it was standard reading in the majority of homes. In rural communities it was often the way that people acquired the hard good necessities of daily life. Socks as well as entire homes were available through mail order or telephone sales. Today the Sears catalogue still exists but it is not delivered by mail nor is it printed. It reaches millions of people via the internet. Are catalogue sales on the internet 'virtual sales' or are they a contemporary equivalent of a time past artifact?

When you explore scholarly publications through Scholar.Google.com, aside from efficiency, how is that different from thumbing through the card catalogue of a massive library? Is the behavior and the intent not the same? Is the result not the same?

The playbill of the local theatre is online with a great deal more information about the movies than is possible in the local newspaper. Is the online playbill virtual?

A Boy Scout books his attendance at Philmont Scout Ranch and completes his plan for the next summer. Formerly he would have done this by telephone or mail. Was his activity 'virtual' and was the group he will be part of a 'virtual' community?

² Unquestioned beliefs and naturalized ideas about the world that both orthodox and heterodox believers espouse Bourdieu (1977); Lange (2006).

When the same Scout corresponds by email with a scientist at the South Pole, instead of using amateur radio, is the communication somehow different? Is he not forming a relationship based on mutual interests, shared knowledge and reciprocity? Is not propinquity achieved? How is this 'virtual'?

When a person creates a blog, Usenet, listserv or bulletin board, is it their intent to form a 'group', as opposed to a 'virtual' group? Is it their intent to connect to real people who share their real opinions, real purposes, real interests, or real knowledge? Is it not their intent to communicate with other people and develop shared purposes and possible real collegiality?

When a person joins such a group, are they looking for 'virtual' friends, to share 'virtual' thoughts, and accomplish 'virtual' goals; or do they want to find real people to which they can connect and share some real affinity? Are their subsequent actions, as part of that group, virtual or real?

Group formation starts with a crystallized idea and the intent of the founders, and is joined later by the intent and ideas of the participants. Their intent is not virtual whether offline or online. The intent is technology agnostic. It can be argued that even if the intent of the founder is to create some online 'virtual' environment, once people join and participate, the intents of the users are primary. Clearly determining intent is a methodological problem but, participant intent should be considered in any investigation of group dynamics.

Current Internet research is wedded to the doxa of 'virtual'. To some extent this is the result of identifying computer communications as somehow different from other forms of discourse. Many researchers identify this genre as "computer-mediated communication" or CMC. The logic suggests that the use of computers compels a difference that must be because such communication is less than 'real' and therefore must be 'virtual.'

Despite the lack of empirical evidence, the assumption of difference prevails and adversely colors research that could potentially illuminate the true nature of communication over the Internet. In the case of Internet research “virtual” connotes differences that may or may not exist.

Wellman and Gulia (1997) posed the question, “are virtual Communities “Real” communities? His answer, in support of virtuality, adds no illumination to the discussion.

“Virtual communities differ from “real life communities in the basis upon which participants perceive their relationships to be intimate People on the net have a greater tendency to develop feelings of closeness of shared interest rather than on the basis of shared social characteristics such as gender and socioeconomic status.”

We assume that the ‘tendency’ they are speaking of is a statistical probability that one motive will be chosen over another. Lacking empirical support for this opinion, Wellman and Gulia (1997) remains a good candidate for further investigation.

The problem is that this conclusion has been reified in other research to the extent that *Scholars.Google.com* reports this article as cited, unchallenged, 429 times. The papers that rely on this work are cited many more times than is reasonable to enumerate.³ While their assumption of “difference” may have merit, the delta can be explained by several different orthodox sociological theories such as Fischer’s Sub-Culture theory (1975).

In contrast to Wellman and Gulia, Milne (2006) compares letter-mail to asynchronous communications such as email and concludes that there is little difference that can’t be explained by a technological determinant. She states, “epistolary⁴ partners can evoke immediacy, intimacy and presence” and “so too

³ This is an example of the creation of doxa, given the stature Wellman holds in the Internet research community. It is surprising that the peer review process has overlooked the failure.

⁴ Contained in or carried on by letters: *an epistolary friendship*. American Heritage Dictionary

digital technologies release human communications.” In regards to the differences between online and offline communications she argues the results, “avoid the binary that has captured much of the research on digital media.” The Binary she refers to is ‘real’ vs ‘virtual.

Is it possible that the term ‘epistolary groups’ or ‘epistolary communities’ is more precise and therefore more scientific than ‘virtual communities’ for describing email based online activities such as listservs, Usenets, blogs, and the like. Epistolary relationships are a time honored subject of studies in literature and communications. It is a time honored and resilient genre.

Also in contrast is the empirical basis on which Milne draws her conclusion. Given speculation vs. empiricism we suggest the latter.

Baym, Zhang, and Lin (2004) in a well designed study of the differences in interpersonal communication across different media (internet, telephone and face-to-face) and conclude “no difference.” In the language of the ‘virtual’ construct, face to face and telephone communication would be considered real and internet would be ‘virtual’. If there is no difference then the notion of ‘virtuality’ must be erroneous. Therefore Internet communication, on an interpersonal level, is just another milieu among the available options. Current studies from Pew Internet In American Life Project and UCLA Center for Communication Policy, 2000) support Baym, Zhang and Lin and rejects Wellman and Gulia. To his credit, Wellman in conjunction with Haythornwaite (2002) recants his earlier conclusions.

Wellman and Gulia are by no means the only scientists who have promulgating this doxa. Hiltz and Turoff (1993 weave the notion of ‘virtuality’ and the assumption of difference through-out their work, as does Jones (1995) Baym (1995, 1997); Liu (1999). Again this is done with a limited empirical rigor.

We are not saying that any of these studies and conclusions are wrong, rather, we are saying that lack the rigor of definitive data. We are saying that

subsequent research based on this speculation fails for the same reason: Science abhors unsupported speculation and contradictory conclusions require the conclusion of no difference.

In the science of internet research the term 'virtual' forms a cognitive and linguistic frame that connotes a difference between communication in real space and netspace. This is done as if netspace⁵ actually exists and has physical properties.

The use of the 'virtual' construct has created amusing logical consequences. For example, Blanchard (2004) uses the term 'virtual community' and challenges the lack of empiricism underlying its use. She asserts that a difference exists but the lack of rigor is due to having no theoretical underpinnings. As an offering, she suggests using "Virtual Behavior Setting Theory" which is an extension after Wicker (1992) and Barker (1978). If you parse the title "Virtual Behavior Settings" you can ask if the virtual behavior is pseudo-behavior, quasi-behavior or just 'like' but not quite behavior. The doxa is so entrenched that no one has questioned this humorous conundrum.

Ironically Behavioral Settings Theory is sociological orthodoxy, a useful theory and does not require embellishment with 'virtual' to make it worthy of investigation. To do so only creates the confusion of terms and more importantly, imprecision. Absent "virtual", *Behavioral Settings Theory* is a candidate for further research.

Other scholars have addresses the problem of 'virtuality' but, given the entrenchment of the term, their analysis has been given very little attention. Rather than creating or using fictional constructs they have approached Internet study by using traditional methodology, constructs, and terms.

For example, recent studies of online deviancy such as flaming or trolling find similarity in the conflicts in online and offline groups and conclude there is little

⁵ Cyberspace is a fictional term coined by Gibson in his science fiction thriller *Neuromancer*.

difference Lee (2005); O'Sullivan and Flanagan (2003); Lange (2006). This research challenges the belief that dis-inhibition resulting from the impersonal nature of online communication produces aggressive and hostile conduct. They conclude that the evidence does not exist to support the assumption of difference. The Subculture Theories of Fischer (1975) predicts this conflict and particularly factionalization.

From another point of view, the work of Tuckman (1965) predicts that intra-group conflict will occur as groups form and move towards developing normative structures for the boundaries of group behavior. Tuckman's theory parallels Fischer, Wirth and Simmel. His research was conducted on four constitutionally, different types of groups with consistent results. Yet many in the internet research community reject this work solely because the research was conducted entirely with offline groups and can not generalized to the Internet.

Technology and Learning (2007) contains an article titled "Virtual Learning Under the Microscope". This provides another example of our conundrum. How is learning, in any milieu, ever virtual? Does this characterization as virtual color the perception of online pedagogy as less than real?

The assumption of difference, hence 'virtuality', seems to preclude good scholarship by suggesting differences that don't seem to exist. One might conclude that the only differences that are indeed 'virtual' are the suggestions of difference.

In the weak case, we have presented observations that suggest that 'virtuality' is a fiction that has not been sufficiently challenged. We have shown that the assumption of difference between real space (offline) and virtual space (online), in research, and may be leading to specious conclusions.

In the strong case, we rely on an argument based on fundamental principles of science.

1. Human behavior is lawful and the underlying principles are observable across all milieus, cultures and personalities (General Process Theory)
2. Therefore when a person uses a computer to communicate they remain human and behave as humans will.
3. To assume a difference i.e. 'virtuality' one has to assume that something in the human computer interaction compels the difference.
4. Absent rigorous and specific determination one can only assume 'no' difference.
5. Until demonstrated otherwise, 'virtuality' is an empirically weak construct.

Indeed, absent clear delineation of some difference the law of parsimony (Occam's Razor) compels a null hypothesis and more rigorous research. Lack of empirical support requires the death of virtuality.

Finally, Howard Rheingold (2000) in the revised edition of his classic work repudiates the notion of the "virtual communities" he eloquently postulated in the first edition. He says, "Online communities are real and as much a mixed bag as any physical community." He describes these communities as places where people talk, argue, seek information, organize politically, fall in love, and dupe others.

Therefore, we challenge the notion of 'virtuality' and ask: Were friendships or familial relationships virtual when it took a month to get a letter? Were letter-mail pen-pals not pals? Before the Internet, did we have paper mediated virtual collegiality.

We assert that behavioral entities, within the technological boundaries of the internet, are no more 'virtual' than conference calls are 'virtual' within the boundaries of telephony. Descriptions that use 'virtual' become more specious as this communication tool is woven into the fabric of daily life.

If there is a difference, we suggest it is propinquity based in time and the negation of distance as a variable.

As a historical anecdote we ask, “Would Jefferson and Adams see their communications as virtual?” We suggest they would probably be bloggers and participate in electronic discussion lists (listservs are now someone’s trademark).

Bibliography

Barker, R. G. (1978b). Theory of Behavior Settings. In R. G. Barker (Ed.), *Habitats, environments, and human behavior: Studies in eco-behavioral science from the Midwest Psychological Field Station* (pp. 213–228). Stanford, CA: Stanford University Press.

Baym, N.K. (1995). The emergence of community in computer mediated communication. In S. G. Jones (Ed.), *Cybersociety: Computer mediated communication and community* (pp. 35–68). Thousand Oaks, CA: Sage.

Bayme, N.K., Zhang, Y.B., Lin, M. Social Interactions across media – Interpersonal communication on the internet, telephone, and face-to-face; *New Media & Society* 2004 Vol6(3):299–318 DOI: 10.1177/1461444804041438, Sage Publications. London, thousand Oaks, CA and Dew Delhi

Berthier, D., (1985) *Intentionality and the Virtual* . Association for cognitive research, Paris, France

Blanchard, A., (2004) *Virtual Behavior Settings: An Application of Behavior Setting theories to Virtual Communities*, *Journal of Computer-Mediated Communication*, Vol 9

Bourdieu, P., (1977). *Outline of a Theory of Practice*. Translated by Richard Nice. New York: Cambridge University Press.

Fischer, C.S. (1975). Toward a Subcultural Theory of Urbanism: *The American Journal of Sociology*. Vol. 80, No. 6 (May 1975), pp 1319-1341, University of Chicago Press, Chicago, IL

Haythornthwaite, C. and B. Wellman (2002) 'The Internet in Everyday Life: an Introduction', in B. Wellman and C. Haythornthwaite (eds) *The Internet in Everyday Life*, pp. 3–42. Malden, MA: Blackwell.

Hiltz, S. R., & Turoff, M. (1993). *The network nation: Human communication via computer (2nd Edition)*. Cambridge, MA: The MIT Press.

Jones, S. G. (1995). Understanding community in the information age. In S. G. Jones (Ed.), *Cybersociety: Computer mediated communication and community* (pp. 1–34). Thousand Oaks, CA: Sage.

Liu, G. Z. (1999). Virtual community presence in Internet relay chatting. *Journal of Computer-Mediated Communication*, **5**. Retrieved March 23, 2003 from <http://jcmc.indiana.edu/vol5/issue1/liu.html>

Lee, H., (2005) *Behavioral Strategies for Dealing With Flaming in an Online Group*. The Sociological Quarterly 46 385-403 Midwest Sociological Society

O'Sullivan, P.B. and Flanagan, A.J., (2003) *Reconceptualizing 'flaming' and other problematic messages*, Vol5(1): 69-84 New Media & Society, Sage Publications.

Rheingold, Howard. (1993). *The Virtual Community: Homesteading on the electronic frontier*. Reading, MA: Addison-Wesley.

Rheingold, Howard. (2000). *The Virtual Community: Homesteading on the electronic frontier*. 2nd Edition Cambridge, MA: MIT Press.

Sapir, E., (1929) *The status of Linguistics as a Science* Language, Vol. 5, pp.209-210

Wicker, A. W. (1987). Behavior settings reconsidered: Temporal stages, resources, internal dynamics, context. In D. Stokols & I. Altman (Eds.), *Handbook of environmental psychology* (pp. 613–653). New York: John Wiley & Sons.

Whorf, B.L., (1941) *The Relation of Habitual thought and Behavior to Language: Essays in Memory of Edward Sapir*. Review of General Semantics, Menasha, WI

Electronic Cites

Lange, P., What is your claim to flame? Volume 11, Number 9 — 4 September 2006 http://www.firstmonday.org/issues/issue11_9/lange/index.html

Kennedy, T.L.M. and Wellman, B. (2007) *The Networked Household* Forthcoming in a special issue of Information, Communication and Society (2007). <http://www.chass.utoronto.ca/~wellman/images/icons/pdf.gif>

Milne, E., Email and *Epistolary technologies: Presence, Intimacy, Disembodiment*. Fiberculture issue 2 new media, new worlds? http://journal.fibreculture.org/issue2/issue2_milne.html

Tuckman, Bruce W. (1965). [Developmental sequence in small groups](http://dennislearningcenter.osu.edu/references/GROUP%20DEV%20ARTICLE.doc). *Psychological Bulletin*, 63(6), 384-399. <http://dennislearningcenter.osu.edu/references/GROUP%20DEV%20ARTICLE.doc>

UCLA Center for Communication Policy (2000) 'Surveying the Digital Future', URL (consulted May 2003): <http://ccp.ucla.edu/pages/internet-report.asp>

Wellman, B. and Gulia, M. (1997)

<http://www.chass.utoronto.ca/~wellman/images/icons/pdf.gif>

