

The Fallacies and Fortunes of ‘Interactivity’ in Communication Theory

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‘Interactivity’ persists as both a buzzword and a fraught concept within communication theory. For 1950s information theorists (e.g. Shannon and Weaver, 1949) interactivity denoted two-way communication between humans, animals or machines, but today it has become exclusively hardwired to the telecommunications and computing sectors. The use and misuse of the term in ‘new media age’ discourses is problematized in this paper by showing that traditional media can enable interactivity—whilst exploring accounts that new media do not, in themselves, guarantee interactivity. The limitations of the concept of interactivity becomes apparent the more it is empiricized or made exclusively reducible to one or other technical medium. This in turn underpins the historicism of second media age thinkers, for whom interactivity becomes synonymous with the ‘interactive society’. (Castells, Van Dijk)

Interactivity has almost turned into a dull buzzword. The term is so inflated now that one begins to suspect that there is much less to it than some people want to make it appear. No company would fail to claim that it is keen on feedback. No leader would fail to praise the arrival of a new communication era. Apparently interactivity has hardly any threatening meaning for the elites. (Schultz, 2000: 205)

‘INTERACTIVITY’ has established itself as both a buzzword and a fraught concept within communication theory. For 1950s information theorists (e.g. Shannon and Weaver, 1949) interactivity denoted two-way communication between either humans, animals or machines, but today it has become exclusively hardwired to the telecommunications and computing sectors. In information theory, the content of communication is separated from the means of communication, and the aim of communication is to control the reproduction of a ‘message’ in any medium or means of communication. Today, the term interactivity is reserved for only communication events which are electronically extended in space and time.

The term ‘interactivity’ has been rapidly conscripted into the discourses of a ‘new media age’. Interactivity is central to a cluster of terms that preoccupy the study of cyberculture. Around it are assembled so many of the binary terms of new media theorizing—active/passive, one-way/two way, linear/nonlinear, synchronous/asynchronous, mediated/face-to-face, etc.

The strongest proponents of the importance of interactivity are the ‘second media age’ theorists (Gilder, 1994; Poster, 1995; Rheingold, 1994) who bestow it with emancipatory meanings in contrast to the one-way architecture of first media age, ‘broadcast’ media. Traditional media of newspapers, radio, television and cinema are viewed as repressive,

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controlling, subordinating and an attack on individuality itself. New media, in contrast, are seen to place the control of meaning-making back into the hands of the individual to the extent that they enable interactivity. Indeed, in the work of Mark Poster, interactivity is elevated to the status of a 'mechanism' of modern media:

Subject constitution in the second media age occurs through the mechanism of interactivity. ... interactivity has become, by dint of the advertising campaigns of telecommunication corporations, desirable as an end in itself, so that its usage can float and be applied in countless contexts having little to do with telecommunications. Yet the phenomena of communicating at a distance through one's computer, of sending and receiving digitally encoded messages, of being 'interactive', has been the most popular application of the Internet. Far more than making purchases or obtaining information electronically, communicating by computer claims the intense interest of countless thousands. (Poster, 1995, 33)

Manuel Castells, in his influential *The Internet Galaxy*, takes the concept further, with the nomenclature 'interactive society', which for him is based on the 'digitized, networked integration of multiple communication modes' (2001, 374). He claims that communication outside of such networked spheres (like face-to face communication) increasingly becomes marginalized: 'From society's perspective, *electronically-based communication (typographic, audiovisual, or computer-mediated) is communication.* (Castells, 2001, 374)

What is clear in these accounts of 'interactivity' is that it is only computer-mediated or tele-mediated *interaction* that is significant. Embodied forms of 'interaction' do not figure at all in the contemporary conception of 'interactivity'. For this reason Roger Silverstone, like Tanjev Schultz, situates the concept as an ideology of contemporary disembodied consumerism:

The new ideology of interactivity...(is)...one which stresses our capacity to extend our reach and range to control, through our own choices, what to consume, both when and how, is seen to promise its reversal. It is hailed to undo a century of one-to-many broadcasting and the progressive infantilization of an increasingly passive audience. It is an expression of a new millennialism. These are the utopian thoughts of the new age in which power is believed to have been given, at last, to the people: to the people, that is, who have access to, and can control, the mouse and the keyboard. (Silverstone, 1999: 95)

One antidote to the inflated uses of interactivity in recent communication theory can be found in John Thompson's typology of 'interaction' which reclaims face-to-face communication as a substantive component of communicative interaction as much as extended forms of interaction.

Thompson distinguishes between three types of interaction: face-to-face, mediated interaction and mediated quasi-interaction which are analytically distinguishable by their spatio-temporal potential (see Table 1). The face-to-face occurs in a context of mutual presence; it is interpersonal and dialogical. Mediated interaction (writing, telephoning) is also dialogical but its spatio-temporal context is extended rather than mutual. Lastly, mediated quasi-interaction (books, radio, newspapers) is also extended in space and time, but is monological or 'one-way'. However, Thompson points out that senders and receivers within this kind of interaction nevertheless form bonds which transcend the fact of interaction.

<i>Interactional Characteristics</i>	<i>Face-to-face Interaction</i>	<i>Mediated Interaction</i>	<i>Mediated quasi-interaction</i>
<i>Space-time constitution</i>	Context of embodied co-presence; shared spatio-temporal reference system	Separation of contexts; extended availability in time and space	Separation of contexts; extended availability in time and space
<i>Range of symbolic cues</i>	Multiplicity of symbolic cues	narrowing of range of symbolic cues	narrowing of range of symbolic cues
<i>Action orientation</i>	Oriented towards specific Others	Oriented towards specific others	Oriented towards an indefinite range of potential recipients
<i>Dialogical/ Monological</i>	Dialogical	Dialogical	Monological
<i>Example</i>	Face-to-face conversation	Letters telephone	Books, newspapers (broadcast) radio & TV

Table 1 Thompson's Types of Interaction

adapted from Thompson (1995, 85 [Table 3.1])

What courses through all of these form-types is the progressive filtering-out of communication cues, where the face-to-face provides a high degree of contextual information (like body language and gestures) whilst the mediated forms substitute such information with narrower contexts (letterhead, signature, time-announcement on the radio, station promotion etc).

The value of Thompson's typology is his insistence that all three of these kinds of interaction may co-exist within a particular communication event. Drawing on Erving Goffman and Joshua Meyrowitz, he shows how a television talk show may involve layers of face-to-face communication (in the studio and between viewers watching the program in the home) as well as the mediated quasi-interaction of program 'fans' that is linked by feedback systems where viewers' comments might be aired on the show.

But Thompson is also interested in the fact that even traditional broadcast media carry forms of interaction and reciprocity that are overlooked by new media theorists. There are letters to the editor, talkback and talkshows, but there is also the fact that readers, listeners and viewers 'quasi-interact' in the act of simultaneous event-reception.

Thompson's insights about 'interaction' provide some restraint to the fortunes of 'interactivity' in recent literature on the Internet. Just as Thompson points out that broadcast media are capable of interaction, we are also compelled to accept that the internet isn't just about interactivity, and that its various sub-media are also capable of broadcast communication, such as bulk email and bulletin board postings. In turn, it needs to be asked why technologically extended 'interactivity' is so closely associated with the Internet, and not with, say, the entire

history of telephony. (That is, we need to question not simply the reductionism of contemporary media theory (eg. digitization = interactivity) but its presentism, i.e. (that the internet gives birth to interactivity) In fact, the Internet is not an easy host to such a blanket characterization, as it provides a platform for an array of communication functions: information retrieval, advertising, browsing, commerce and many forms of anonymous communication. The only sub-media of the Internet which uniquely provides a communication form that cannot be found in other media is Usenet or WWW-hosted discussion groups, which is capable of scales of participation that are not possible in embodied fora. But even with these, interactivity cannot be so easily heralded as some kind of special property.

A key theorist who can assist in understanding interaction within computer-mediated communication (CMC) is Rafaeli, who distinguishes between connectivity, reactivity and interactivity (Rafaeli, 1988). Connectivity refers to the technical way network architecture makes interactivity possible, but also important is the way communication histories within CMC determine the nature of the interactivity that happens within it. In making this distinction, Rafaeli is able to show that, two-way communication does not, in itself, guarantee interactivity. If an exchange does not develop into a relationship where one utterance becomes a context for another, the discourse may become closed and self-referential. Conversely, reactive communication is not just typical of broadcast communication, but is possible within networks.

Rafaeli and Sudweeks have argued that on-line interactivity needs to be thought of as existing across an entire network, not simply between two given interlocutors (see Rafaeli and Sudweeks, 1997). Two-way communication must be part of a chain of inter-related messages for genuine interactivity to occur. Every message ‘must take into account not just messages that preceded them, but also the manner in which previous messages were reactive’ (1997). Rafaeli’s work on interactivity is further developed by Sarah McMillan who argues for a ‘registrational view of interactivity’ which measures a ‘medium’s potential to register information from and thereby also adapt and/or respond to, a given user’s explicit choice of communication method.’ (McMillan 2002: 274) As Rob Cover has observed of this view, messages must be seen to come from both content-creator—perhaps in a time-lapsed system—or the communications method itself. And from the user as responses, inputs, commands, or various other forms of utilization that alter the mode, style, type, form, or indeed, the content itself’. (Cover 2004: 108)

If this registrational view of interactivity is adopted, it suggests that much of the way in which the Internet sub-media are used is seldom interactive, especially if the question of anonymity in CMC discussion groups is addressed.

The views of Thompson—that traditional media can enable interactivity—and Rafaeli—that new media do not, in themselves, guarantee interactivity—arrest much of the popular usage of this concept. The limitations of the concept of interactivity become apparent the more it is empiricized or made exclusively reducible to one or other technical medium. This in turn underpins the historicism of second media age thinkers, for whom interactivity becomes synonymous with the ‘interactive society’. (Castells, Van Dijk)

A means of avoiding the fallacies which have befallen ‘interactivity, is to distinguish between interaction and *integration*. In this distinction, interaction is still important, but needs also to be viewed in terms of the fact that all concrete interactions occur in the context of dominant frames of communicative integration (see Table 2). Following C. H Cooley, Calhoun explores forms of *indirect social relationships* that are enabled by complex communication systems and through which individuals are nevertheless able to form integrating bonds of intimacy and many-sided recognition.

<i>Type of Relationship</i>	Primary (from Cooley)	Secondary (from Cooley)	Tertiary	Quaternary
Characteristics	Affective ties	Impersonal groups	No embodied co-presence; 'mediated' but parties aware of relationship	One party unaware of relationship
<i>Direct/indirect</i>	Direct	Direct	Indirect	Indirect
Example	Family/friendship groups	Committees	The corporation; correspondence; information technology	Surveillance Via information technology

Table 2 Calhoun's Four Types of Social Relationship Based on Calhoun (1992)

Where such recognition occurs in large volumes, interaction is no longer a condition of social connection, as individuals become integrated indirectly by the agency of technologically extended media forms. Thus, the integration thesis rejects the idea that the study of communication is reducible to documenting empirically observable kinds of *interaction*, be these interpersonal or extended (see Calhoun 1986; 1992).

In three important articles² on computer-mediated social relations Calhoun innovatively develops the idea of indirect social relationships. Following C H Cooley's work in *Social Organization* Calhoun works up a typology-driven model of communicative levels of social integration. Where Calhoun differs from Thompson and Meyrowitz is in placing social *integration* rather than interaction as the traversing agency across these levels. To explain this we need to revisit Cooley for a moment. In *Social Organization* Cooley proposes the need to distinguish between primary and secondary social relationships. 'A primary relationship must be both directly interpersonal and involve the whole person' (kinship relations, enduring friendships). A secondary relationship, by contrast, 'need meet only the criteria of directness' but not in a way which permits any kind of intimacy or many-sided recognition. (encountering shopkeeper, embodied intermediaries) Calhoun 1986: 332

Secondary relationships are also cause for the experience of wide spread anomie, precisely because of their practical difference from primary relationships. Calhoun argues that this difference is ontological, not simply a matter of perception. Secondary relationships are generally held in low esteem, by city dwellers and as advanced by Cooley himself at the beginning of the 20th century.³ Primary relationships, found in family and face-to-face networks provide spontaneous settings of integration even when they involve conflict.

² Calhoun 1986, 1992, 1998.

³ Elsewhere, Calhoun argues that Cooley instantiates a version of Tonnies's *Gemeinschaft* (read as primary relationships) and *Gesellschaft* (read as secondary relationships) dichotomy in which the latter are devalued as inauthentic. (Calhoun 1993 212) However, at the same time Cooley does not adequately distinguish modernity from pre-modern forms of society. For Calhoun, modernity is not constituted by the presence of secondary

The frustration of secondary relationships, in workplaces, in the marketplace, in the public sphere, is that they take up so much of our time, are emotionally involving but unfulfilling. Whilst it is true that primary relationships may also be unsatisfying, at least they are capable of generating enduring loyalty and satisfactions which secondary ones can't. Secondary relationships foster a destructive notion of freedom, in which 'strangers often seem to exist *only* to annoy us.' (or as Sartre once suggested: 'Hell is other people'...and that 'relationships are simply the choices of the moment rather than commitments.' (335) Such relationships are purely functional, such that when even their functionality fails it reverberates as an even more intense condemnation of the hopelessness of the emotional or other value of such levels of association.

Under such conditions we seek to avoid emotional involvement in our dealings with strangers and 'deal with problems by trying to escape' as narrated in P. Slater's account of the 'pursuit of loneliness.' Such a condition has also become the subject of a film like "*Falling Down*"...

The ontological impasse between primary and secondary relationships, which are in some sense 'proven' by the everyday tension between them, argues Calhoun, is eased by the widespread development of what he calls tertiary 'indirect' relationships.

'Noting the impacts of modern communications technology, we may go further and identify as indirect those relationships that require the mediation of a complex communications system.'⁴

For Calhoun, tertiary relationships are ones that individuals are 'aware of' and active in, for which he lists bureaucracy as an archetypal form. 'We have "tertiary" relationships with those to whom we write and complain about the errors in our bank statements, with our political representatives (most of the time), and, often, with the senior managers of the companies for which we work. It is these large-scale relationships which are enhanced by apparatuses of connectivity, telephony, CMC as they allow for a compression of scale in their speed and efficiency and give rise to illusions of participatory democracy.

But to this level he adds Quaternary relationships are ones which we are not aware of such as surveillance infrastructures, and we are exposed to socio-technical systems in which we find ourselves unwilling participants. (332-33)⁵

relationships and the absence of primary ones, but in both modern and pre-modern societies there is a co-presence of both.

Rather, modernity is distinguished by the increasing frequency, scale, and importance of indirect social relationships. Large scale markets, closely administered organizations and information technologies have produced vastly more opportunities for such relationships than existed in any premodern society. This trend does not mean that direct relationships have been reduced in number or that they are less meaningful or attractive to individuals. Rather, it means that direct relationships tend to be compartmentalized. They persist as part of the immediate life-world of individuals, both as the nexus of certain kinds of instrumental activities (e.g. the many personal relationships that smooth the way for or make possible business transactions and, especially, as the realm of private life (family, friends, and neighbors). However direct interpersonal relationships organize less and less public life, that is, fewer and fewer of the crucially determinant institutions controlling material resources and exercising social power. Indirect relationships do not eliminate direct ones, but they change both their meaning and a sociological significance. (1993: 211-212)

⁴ Significantly, Calhoun says, such tertiary relationships need not involve ordinary written communication, it need not involve electronic technology, though such technology enhances the reach and the efficacy of such systems.' (Calhoun 1986: 332)

⁵ Calhoun's tertiary and quaternary levels are dealt with in most CMC literature in terms of use/abuse, 'impact analysis' or within the sociology of technology in terms of a positive and negative effects debate. (See for example Spears and Lee)

Both tertiary and quaternary relationships allow for what Calhoun calls large-scale social integration, the definitive locus of which is the modern 'mega-urban' city. This, whilst, some may see technologically-mediated relationships as just an disembodied extension of estranged secondary relations⁶ (particularly when tertiary relationships are only a rudimentary or modest feature of social relations generally), for the most part, he argues that such a level of relationships can be experienced as emancipatory. Remembering that Calhoun was advancing this thesis well before the utopian discourses, which heralded the Internet, as relieving everyone from the impersonal aspects of trying to maintain large-scale integration in an embodied form by way of networks of agents.

Instead the 'proliferation of tertiary relationships cuts down on secondary, but not primary, relationships.' (336) Calhoun argues that in substituting for the unwieldiness of large-scale social integration occurring at an embodied level, tertiary relationship can actually free individuals up to spend more time in primary modes. 'We might focus time and energy on community building, friendships and family life, though this is only a possibility, not an automatic result.' (336) (Steve Graham)

For Calhoun, this possibility is a feature of all technologically extended and mediated relationships, not simply communicative ones. He gives the example of the Automatic Teller Machine. 'Direct interpersonal contact is reduced, as the customer no longer deals with a teller. But the customer also spends less time standing in lines and has greater flexibility as to when to use banking services.' The customer does not have to endure the 'rebuff of non-recognition.... There is often a disappointment on the customer's side at not being recognized (and apparently not trusted) by a person with whom he or she may interact on a regular basis.... It is not obvious that we are losing much of value in giving up this sort of "personal" interaction.' (336)

Conversely, argues Calhoun, the flexibility we have with interfacing with the much more numerous machines, frees up time which can be used more productively elsewhere, as well as 'redeployed into primary relationships'.

However, Calhoun's caveat is that while CMC might greatly assist in large-scale integration,

'there is as much (or more) reason to think that computerization and new communications technologies will lead to, or accompany further deterioration of interpersonal relationships. A drift toward relationships of convenience might be accelerated; passive enjoyments from the mass media might predominate over active social participation. A few people might even have wind up preferring relationships based on single common interests and mediated through computer networks — or worse (from the point of view of social integration), preferring the company of computers themselves, which are dependable, don't talk back, and don't make silly mistakes very often.' (337)

In other words, Calhoun perceives a tension between the capacity of tertiary relationships to enhance and re-generate primary ones and their tendency to replace them altogether. This tension is, arguably, a central problem of communication theory which ultimately hinges on evaluating the nature of sociability within computer-mediated communication.

⁶ 'Certainly, they think, a world dominated by relationships conducted over the phone, by correspondence, or with the assistance of computer would be much worse.' (Calhoun 1996: 335)

References

- Calhoun, C. (1986). 'Computer technology, large-scale social integration and the local community' in *Urban affairs quarterly*, Vol. 22, No. 2, pp. 329-349.
- Calhoun, C. (1992). 'The infrastructure of modernity: indirect social relationships, information technology, and social integration'. In H.Haferkamp & N.Smelser (eds), *Social change and modernity*. Berkeley: UCLA Press.
- Castells, M. (2001). *The internet galaxy*. London: Oxford UP.
- Cover, R. (2004). 'Interactivity: Reconceiving the audience in the struggle for textual 'control' of narrative and distribution', *Australian journal of communication*, Vol. 31, No. 1, pp. 107-120.
- Gilder, G. (1994). *Life After Television*. New York: Norton.
- McMillan S. (2002). 'A four-part model of cyber-interactivity': Some cyberplaces are more interactive than others, *New media and society*, Vol. 4, No. 2, pp. 271-291.
- Poster, M. (1995). *The second media age*. Cambridge: Polity.
- Poster, M. (1997). 'Cyberdemocracy: Internet and public sphere'. In D. Holmes (ed), *Virtual politics: identity and community in cyberspace*. London: Sage Publications.
- Rafaeli, S. (1988). Interactivity: From new media to communication. *Sage Annual Review of Communication Research: Advancing Communication Science*, Vol. 16, eds R. P. Hawkins, J. M. Wiemann and S. Pingree, pp. 110-134.
- Rafaeli, S. and Sudweeks, F. (1997). 'Networked interactivity'. *Journal of Computer Mediated Communication*, Vol. 2 No. 4. Available at www.ascusc.org/jcmc/vol2/issue4/rafaeli.sudweeks.html.
- Rheingold, H. (1994). *The virtual community*. London: Secker and Warburg.
- Schultz, T. (2000). 'Mass media and the concept of interactivity: an exploratory study of online forums and reader email'. *Media, Culture & Society*, Vol. 22, No. 2, pp. 205-221.
- Shannon, C. and Weaver, W. (1949). *The mathematical theory of communication*. Illinois: University of Illinois Press.
- Silverstone, R. (1999). *Why study the media?* London: Sage.
- Slevin, R. (2003). *The internet and society*. Cambridge: Polity.

Thompson, J. B. (1995). *The media and modernity: a social theory of the media*. Stanford: Stanford University Press.

Turkle, S. (1984). *The second self*. New York: Simon and Schuster.

Turkle, S. (1995). *Life on the screen: identity in the age of the internet*. New York: Simon and Schuster.