

# Various Views on Digital Interactivity

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## INTRODUCTION

As Kress and Van Leeuwen (2001) state, there is no communication without interaction. Broadly, levels of “interactivity” can be recognized as depending on quality of feedback and control and exchange of discourse according to the mode or modes (“multimodal discourse”) involved. Important constraints that operate to modify interactivity of any kind can be identified as the amount of “common ground” (Clark, 1996), constraints of space and time, relative embodiment, and choice of or control over the means, manner, and/or medium of feedback.

Ha and James (1998) emphasize the element of response as characterized by playfulness, choice, connectedness, information collection, and reciprocal communication.

## BACKGROUND: SELECTED ELEMENTS OF DIGITAL INTERACTIVITY

### Feedback

Any evaluation of feedback, as defined by Kiouisis (2002), should take into account various factors. For example, feedback should not be just two-way, but should encompass several different avenues and facets of expression; it can be linear and/or non-linear. Hyperlinks should offer the element of choice, and the ability to modify the mediated environment must exist. Individual perception of interactivity depends on the quality of media (form, content, structure, relation to user) but also on “social presence” (Short, Williams, & Christie, 1976) or “telepresence” (awareness of mediated environ-

ment), perceived speed, timing, and flexibility. Kiouisis adds to these factors the concepts of “proximity”—how “near” the user feels—and “sensory activation”—the involvement of the user’s senses.

### Immersion and Engagement

The qualities of “immersion” and “engagement,” referred to by Douglas and Hargadon (2000) as “The Pleasure Principle” and equated by Laurel (1993) with the “willing suspension of disbelief,” appear to be crucial in creating the illusion of interaction.

The role of immersion and engagement is obvious with reference to simulations, the use of links, and user perception of control and decision-making.

### Simulation

Simulation (particularly as in Game format) privileges a sensation of control, a sense of presence, and entry into mediated environments as “active” rather than “passive” through manipulating time (speed involved in decision making), agency, the spatial orientation of the user, and what Darley (2000) describes as “vicarious kinaesthesia:” the feeling of “direct physical involvement” (p. 157). Perhaps we might add to this list the element of “surprise,” the “unexpected,” the *apparently* random, necessitating a response and therefore creating an impression of responsive dialogue and mutual discourse, a perception of feedback and engagement.

### Play

In all questions of interactivity, the target audience must be considered (McMillan, 2002), and the nature of links must be examined. Manovich (2001) com-

plains that by following “pre-programmed, objectively existing associations,” users of interactive media are being asked to mistake the structure of somebody else’s mind for their own (p. 61).

One of the characteristics of interactivity is the nature of “play” involved. The importance of play in performing identity and social structure has long been recognized (Huizinga, 1955), and, as Zimmerman (2004) has more recently noted, play both expresses and simultaneously resists the structure of the system within which it exists. Within any interactive system, this element of play could perhaps be seen as a crucial factor in removing the impression of a predictable structure, which stifles user individuality and involvement. Although choices, or links, are indeed programmed, there can be no play without constraints; games always have “rules” that cannot be changed without creating a different “game” (unless, of course, this is a device of the game creator to produce engagement and thus reinforce the nature and structure of the game!)

This consistency of “world” or “play” further contributes to the “willing suspension of disbelief”. As Douglas (2000) remarks, ambiguity is always embedded in the interactive, but this ambiguity can be harnessed in service to the sense of play, which of itself both provides and subverts the structural framework.

### **Hypertext: Interactivity as Narrative and/or Drama**

No consideration of digital interactivity is possible without a discussion of interactive hypertext, often characterized as “multidimensional.” It is necessary to remember that multidimensional does not mean “random explorations,” but what Douglas (2000) calls “polysequential” rather than Nelson’s “non-sequential” writing (Nelson, 1992), or even Bush’s 1945 “encyclopedia of associative trails” for Memex (Bush, 1992), for in such an “encyclopedia,” although the associations of the reader will be used to construct individual unique meaning or personal narrative, the “encyclopedia” has not *necessarily* been structured for this purpose by the author; this is the difference between constructed narrative and information retrieval.

Multidimensional hypertext at its best takes advantage of and exploits the human tendency to construct narratives to make sense of the world, relying on individual human selection of appropriate stimuli and human ability not simply to choose links but to create connections, rather than simply following pre-ordained paths. Joyce (1995) remarks that the user/reader’s task is to make meaning by perceiving order in space, so that the meaning is orderly but there is a continual replacement of meaningful structures throughout the text: the narrative is constantly evolving in time and space.

Murray (1997) identifies three qualities (which she calls “pleasures”) that characterize the interactive audience: immersion, agency, and transformation. Immersion, meaning engagement of the imagination and the senses, has already been discussed as a property of interactivity. Murray emphasizes the active audience and differentiates between the role of the interactive user/reader and the role of the author by describing the user/reader as agent. Her emphasis on various points of view as one technique for incorporating multi-sequencing in hypertext is typical of a narrative approach.

An alternative approach is that of Laurel (1993), who suggests drama as a model for interactivity, and emphasizes three features:

1. Enactment (to act out) rather than to read. Narrative is description; drama is action.
2. Intensification. incidents are selected, arranged, and represented to intensify emotion and condense time.
3. Unity of action versus episodic structure. In the narrative, incidents tend to be connected by theme rather than by cause to the whole; in drama, there is a strong central action with separate incidents causally linked to that action. Drama is thus more intense and economical.

When Laurel advocates strategies for designing interactive media, she emphasizes that the conceptual structure should encourage the potential for action. Laurel outlines several key points for designing interactive media, and emphasizes that tight linkage between visual, kinesthetic, and auditory modalities is the key to immersion.

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