Rediscovering Post-modern Perspectives in IT: Deconstructing Voithofer and Foley

David L. Solomon

My original paper, “Toward a Post-Modern Agenda in Instructional Technology” (Solomon, 2000), was an interdisciplinary review of the literature and offered multiple perspectives of the subject, a post-modern approach sometimes referred to as multivocality. I found several themes inherent in the literature, which I presented as eight general assumptions about post-modernism for consideration, discussion, and adoption. Then, I concluded the paper with a discussion about the potential contributions of post-modern concepts in instructional technology. In a reaction to my paper, Voithofer and Foley (this issue) misinterpreted some of the purposes and assumptions expressed, by seeing my view as an effort to construct a model of a post-modern agenda, which could not be further from my original purpose. This paper serves to clarify my position as a sequel to their response.

I have been given an opportunity to answer Voithofer and Foley’s (this issue) response to my paper (Solomon, 2000) in which I attempted to construct a cogent definition of post-modernism—to advance a convincing set of ideas—for consideration and discussion. I purposely offered multiple representations of content, not as a basis for suggesting a post-modern agenda, but rather as a method for helping the reader construct personal meaning by interpreting various perspectives. It was never intended to be a model or an agenda as Voithofer and Foley proposed. Instead, I wanted my paper to be a catalyst for initiating dialogue around post-modern issues. While I am pleased to participate in this dialogue, I am also disappointed that Voithofer and Foley excluded many substantive perspectives about culture in relation to learning within our own field. I often wonder who is underrepresented in post-modern discourse. In this paper, I assume a “self-reflexive” stance, recognizing that I value many visionary insights that have been shared within our field, some of which remain unexamined by post-modern researchers. Accordingly, this paper contributes to the dialogue about culture and learning in Instructional Technology (IT). Next, I review a few opportunities for research spurred from the growing contextual movement in the field. Then, I suggest some of the philosophical implications for IT, derived from my own research on perspectives, foundations and elements of post-modernism in theory and practice (Solomon, 2001).

1 Throughout this document, the term post-modern will be hyphenated to reflect the logic of Jencks (1995), a leading authority on post-modernism who believes that the word should symbolize “... that paradoxical dualism, or double coding, which its hybrid name entails: the continuation of Modernism and its transcendence” (p. 30).
Issues of Culture in Relation to Learning

I happen to agree that relationships between culture and learning could be stronger in IT; however, it is irresponsible to state that the field has failed in this regard. The same year that Dale (1946) introduced the “cone of experience,” Morris (1946) published *Signs, Language and Behavior*, which had a substantial impact on the field. In particular, Morris defined a *sign* as “something that directs behavior with respect to something that is not at the moment a stimulus” (p. 354). Morris used carefully selected language to explain his theory of signs, which was noted by Knowlton (1964), who was concerned with developing a conceptual scheme for the audiovisual field. Knowlton was particularly interested in clarifying terms and constructing shared meaning among the members of the audiovisual language community.

Knowlton (1966) distinguished between *signals*, which resembled what they signify, and *symbols*, which did not physically relate to what they signify, and he developed a metalanguage for talking about pictures (Anglin, Towers, & Levie, 1996). Knowlton’s work in semiotics was advanced by Warren D. Stevens, who began to interpret signs in relation to culture.

Stevens (1969) promoted a symbolic interactionist model that integrated individual, interpersonal, and social considerations into one comprehensive framework. Stevens asserted that:

> Because all socially significant human-environmental transactions must ultimately occur within some social setting, it should follow that all sign behavior shared for things and events by members of a society could be considered congruent with what one commonly refers to as the *culture* born by that society. (p. 154)

Stevens (1970) also distinguished between different sense modes involved in culture-mediating processes, which he called *formative* (the development of capacity for symbolic perceptions), *informative* (the arousal of perceptions in the absence of immediate overt action) and *instructional* (intentional action designed to guide formative or informative transactions toward desired objectives). Stevens (1970) also had concerns about language and culture:

> Though instructional objectives and procedures always emerge in social context, the instructional process can be mediated by human beings and/or nonhuman devices. A teacher can intentionally engage a student in interpersonal formative transactions as when modeling wordsounds and correcting recitation in a language class; he can personally inform his students about the French Riviera via lecture; or he can guide them into formative laboratory experiences and informative readings. His behavior can be observed directly or via audio- or videotape, closed- or open-circuit television, or simply a set of handwritten instructions. In all cases he guides his student into formative and/or informative transactions either within himself or with other mediators of the portion of culture which it is his task to share. (p. 184)

Stevens’s concerns, which address the complexities of life in classrooms with technology, are central to contemporary post-modern scholarship; and, they also frame Voithofer and Foley’s illustration of post-modern IT research. In addition, Stevens’s views align with De Vaney (1998), who asserts that “film, video, computer software, and web sites act as teachers and partially displace the human teacher” (p. 3), imitating popular culture (in an effort to buy student user-ship).

Finally, Cassidy (1982) presented semiotics as a model for analyzing education and IT. Cassidy’s framework was heavily influenced by the philosophical writings of Charles Morris. Like Knowlton (with whom he coauthored), Cassidy found a need to create structure that could illustrate the relationships among elements in education and IT, explore the meaningfulness of these relationships and synthesize interpretations of signs in various conditions. Cassidy offered semiotics as an alternative mode of inquiry in IT with the hopes of clarifying a vision for the field.

Together, Morris (1946), Knowlton (1964; 1966), Stevens (1969; 1970) and Cassidy (1982) provide a theory base for post-modern research within our own field; yet, most of these authors remain unexamined by post-modern IT researchers. Perhaps we need to “question the authority” (as Voithofer and Foley propose) of post-modern scholarship and ask why the work of these authors is conspicuously absent from post-modern discourse. This, I believe, could be considered a form of reflective practice, too.
Issues of Context in Relation to Learning

Although the instructional design community has long recognized the important role of context in instruction, its role tends to be narrowly defined by the immediate environment in which it is situated. Tessmer and Richey (1997) described a new design phase called contextual analysis, which addressed a multilevel body of factors in which learning and performance are embedded. A given context may have different aspects, such as a social, cultural or political aspect, and each aspect may have various factors that impact learning and performance. Recognition of these environmental characteristics begins to broaden one’s understanding of context, which is also composed of various levels that are defined by both spatial and temporal qualities. Spatial levels would include the learner, the immediate learning environment, and the surrounding support environment. Temporal levels distinguish between the various contexts that occur before, during, and after learning. Tessmer and Richey’s contextual analysis model offers a practical approach to designing context-sensitive instruction while also contributing to a growing contextual movement in education. The efficacy of this model, perhaps with some emphasis on ecological variables, could be explored by post-modern researchers. At the very least, it could contribute to Voithofer and Foley’s (this issue) example of an IT research project.

Although a discussion about ecological systems theory was beyond the scope of my initial paper, I referenced Bronfenbrenner’s (1979, 1988) work as holding promise for our field. Voithofer and Foley (this issue) misrepresented my views on this subject as “a pluralistic incorporation of disciplines into IT.” Actually, I believe that Bronfenbrenner’s work with ecological systems theory provides an even broader view of context that can be applied to our field. As with the contextual analysis model (Tessmer & Richey, 1997), Bronfenbrenner explored interrelationships between contexts over time; however, the ecological systems model calls attention to interactions that often occur between contexts. A broadened view of context in an applied setting would explore intracontextual and intercontextual interactions involved in learning. Accordingly, an ecological perspective would:

- Focus on learning within social contexts;
- Build connections between overlapping ecological systems to promote learning; and
- Acknowledge the integration of complex systems, operating together, to influence learning.

These perspectives support Visser’s (1999) ecological vision of the learning environment. Here:

an ecological awareness is required to see how the different pieces of the learning environment as a whole hang together, interact with each other, function in the context of the whole, and allow the whole to acquire a meaning over and above the sum of its parts. (Visser, 2001, p. 448)

The implication here is that ecological awareness could enhance contextual analysis as a design phase.

An even broader view of context builds on the ecological model and assumes more of an anthropological perspective where learning is understood to occur only in the context of meaningful activity (Jonassen & Rohrer-Murphy, 1999). One of the most fundamental tenets of activity theory is that people cannot understand something without acting on it (Jonassen, 2000b). Given this notion, context becomes a primary focus for IT research as learning results from interactions with the environment. The activities, social-relationships, and desired-knowledge states that become integrated in rich learning contexts (or activity systems) are all open to scrutiny in post-modern IT research, as described by Voithofer and Foley (this issue). Context, through the lens of activity theory, is understood to be sociocultural and activity-oriented (Cole & Engeström, 1993; Jonassen, 2000b). A process, along with general guidelines, illustrates some of these contextual considerations involved in using activity theory as a framework for designing student-centered learning environments (Jonassen & Rohrer-Murphy, 1999). Like the contextual analysis model, Jonassen and Rohrer-Murphy offer additional tools and techniques that could make substanc-
tive contributions to post-modern IT research.

For practitioners and researchers, the implications of post-modernism in relation to IT suggest that there are many pieces to the learning ecology that need to be addressed, including the interactions that occur within and between contexts. Within any given context, there are anthropological variables that influence learning. In my research, language and culture were prominent themes (Solomon, 2001); however, many more are sure to exist.

Recently, anthropological learning theories have suggested that learning occurs only in the context of meaningful activity. These theories, which include situated, sociocultural, ecological, everyday, and distributed conceptions of cognition, represent a paradigm shift to views of learning that are more social, conversational, and constructive than traditional approaches. By and large, anthropological learning theories assume a philosophical stance that is aligned with post-modernism.

In particular, activity theory provides a philosophical framework for understanding what it means to be learning through a post-modern lens. Within this framework, learning is understood to be:

1. A process of meaning making (Jonassen, 2000a);
2. A dialogue that is socially negotiated among people who are engaged in activity (Jonassen, 2000a); and
3. Phenomena that appear to be distributed among culture and history and mediated by artifacts, tools and sign systems (Cole & Engeström, 1993; Cole, Engeström, & Vasquez, 1997; Jonassen, 2000a; Jonassen & Henning, 1999).

This philosophical framework, along with various definitions and explanations of post-modernism derived from my research (Solomon, 2001), contributed to the following composite statement about post-modern instructional design. A post-modern philosophy of instructional design encompasses at least four areas of theory and practice:

1. **Instructional design** is a dialogical and critical process that welcomes a blending of theoretical orientations and approaches.
2. **Instructional messages** reflect multiple representations of content and knowledge.
3. **Instructional strategies** are focused on meaning making in sociocultural contexts and include dialogue, reflective practice, and multiple delivery methods and tools.
4. **Learner characteristics** emphasize anthropological variables that may include distribution and relationship of peoples, environmental and social relations, and culture (Solomon, 2001, p. 194).

**Philosophy: Looking back**

Posing questions is the fundamental task of philosophy, which is the basis for research and the foundation upon which our field is built (Koetting, 1996). Although my paper recognized the rarity of philosophical inquiry within our field, I failed to acknowledge the significant contributions that Jonassen (1984; 1991a; 1991b) has made in this area. Jonassen (1984) explored the nature of knowing and learning from media, long before post-modernism was “in vogue,” offering various philosophical lenses through which mediated experiences can be interpreted. In addition, Jonassen’s (1991b) comparison of philosophical paradigms provided further support for exploring the nature of learning and the significant role of context in our post-modern society. Gruender’s (1996) philosophical appraisal of constructivism is another perspective that adds to this dialogue. In particular, he proposed a “realistic” constructivism based on three interdependent parts: an understanding of (a) individual people and how they come to learn, (b) how the social world works, and (c) how the natural world works. Gruender also explored what it means to be learning, and posited that there are many kinds of learning processes, some of which occur with conscious effort and others without. More recently, Martin (2000) illustrated a philosophical framework for the field, which surfaced after my paper was written. Martin suggested that post-modern philosophy could guide practice. In particular, he posited that decisions about educational technology must be grounded in what a culture holds to be valuable. These philosophical perspectives provide a framework for IT re-
search in general, as well as lending support to Voithofer and Foley’s (this issue) illustration of a post-modern research project.

Philosophy: Moving Forward

If the function of philosophy is to clarify, then asking philosophical questions should lead to answers—and, it should also generate more questions. I once asked an instructor if the field of IT was more concerned with learning or instruction. It is a tough question, even for a post-modernist. Post-modern perspectives in instructional technology would not assume an either-or stance. More appropriately, a post-modernist might suggest that the field was concerned with both, as well as the design of new learning environments. The answers depend on one’s philosophical orientation.

My paper was always positioned as an inchoate exploration of post-modernism, limited by constraints of scope and time to constructing an integrative definition. I acknowledged these limitations and my own point of view, and I hope that Voithofer and Foley will recognize how their own biases shaped their response to my paper. I would like to have seen them weave some self-reflexivity into their response, as they suggested. They wish to elevate post-modernism to agenda status within the field and their contribution to this dialogue is trenchant, particularly with regard to post-modern research. While their illustration of a post-modern IT research project is interesting, my personal preference would be to critique an authentic study. I share Voithofer and Foley’s (this issue) enthusiasm about cultural studies, and at the same time I recognize that ethnographic inquiry is time consuming and challenging (Driscoll, 2000). These are real problems in the rapid pace of the information age. As with sculpture, we approach post-modernism from different points of view. We have read many of the same articles and perhaps some different ones, as well. I still find myself wondering if the field has failed to integrate issues of culture and learning—or if we have failed to recognize or build on the significant contributions that exist in our own backyard. It is clear that we all agree on one thing:

Post-modernism’s role in IT should not deviate from rigor and quality.

David L. Solomon is Creative Director in Training Operations at PentaMark Worldwide. He is also Research Fellow at the Learning Development Institute and may be reached at david.solomon@pentamark.com.

Author’s note: I was introduced to post-modernism during a group project in one of Rita Richey’s graduate classes at Wayne State University. My interest in the subject flourished, and post-modernism became the focus of my dissertation research. Clearly, I found a problem to solve: No one I knew could explain post-modernism, and almost everyone I encountered in the field had no idea what it was. Gary Morrison was a member of my doctoral committee and introduced me to the classic works of Morris (1946), Knowlton (1964;1966), Stevens (1969; 1970), and Cassidy (1982). Under his guidance, I submitted my work to the Association for Educational Communications and Technology (AECT) and was awarded the 2000 ETR&D Young Scholar Award. Richey and Morrison encouraged me to explore this topic with rigor and clarity and I am grateful for their support.

REFERENCES


