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EXPANDING CONCEPTIONS OF EXPERIENTIAL LEARNING: A REVIEW OF THE FIVE CONTEMPORARY PERSPECTIVES ON COGNITION

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This article offers a comparison of five distinct currents of thought apparent in recent scholarly writing addressing experiential learning, defined here as a process of human cognition. These five perspectives were selected for their heuristic value in expanding conventional notions of experiential learning, ranging from conceptions of reflective constructions of meaning to psychoanalytic, situated, emancipatory, and ecological theories of learning. A rationale for this typology is outlined, and the problems of classification and comparison of multiple perspectives are discussed. The five perspectives are each described briefly, outlining their view of knowledge, learning, and teaching; their understanding of relations between knower, culture, and knowledge; and critiques and questions raised by other perspectives. Caveats about the limitations and presumptions of such a typology are declared along with invitations for response and critique.

Experiential learning is, as Michelson (1996) suggests, arguably one of the most significant areas for current research and practice in adult education and increasingly one of the most problematic areas. Much adult learning is commonly understood to be located in everyday workplace tasks and interactions, home and family activity, community involvement, and other sites of nonformal education. The term *experiential learning* is often used both to distinguish this ongoing meaning making from theoretical knowledge and nondirected informal life experience from formal education. When brought into the purview of the educator, the notion of experiential learning has been appropriated to designate everything from kinesthetic-directed instructional activities in the classroom to special workplace projects interspersed with critical dialogue led by a facilitator, to learning generated through social action movements, and even to team-building adventures in the wilderness. Definitional problems continue when one tries to disentangle the notion of experiential learning from experiences commonly associated with formal

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education such as class discussions, reading and analysis, and reflection. As Alheit (1998) has pointed out, the appropriation of human life experience as a pedagogical project to be managed by educators is highly suspicious.

This is the catalyst for my concern to open wider approaches to theorizing experiential learning. I suggest this colonial impulse is enabled precisely by a predominant conception in much educational theory and practice of experiential learning as reflective construction of meaning, with particular emphasis on critical reflection and dialogue. This conceptualization was popularized by Kolb (1984) and Schon (1983), and a significant body of theory and critique has developed to debate just how reflection-on-experience unfolds in different contexts to create knowledge (later discussed in greater detail). Learning is presented as a reflection-action (or mind-body and individual-context) binary: recalling and analysing lived experience to create mental knowledge structures. Implicit is a process of privatizing, objectifying, ordering, and disciplining experience, a process that inserts governance as a matter of course and naturalizes hierarchies of knowledge and skill. The resulting appropriation and compartmentalization by educators of fluid spaces of human meaning making reifies, essentializes, and narrativizes *experience* as a knowable resource to be exploited in the service of rationalistic and utilitarian notions of knowledge, splits rational consciousness from messy matters of the body, regulates subjects through technologies such as critical reflection and accreditation of prior learning experience (Michelson, 1996), and often ignores issues of identity, politics, and discursive complexities of human experience (and the problematic of its knowability) unfolding amid what Spivak (1988) has called "fractured semiotic fields." Michelson's (1999) innovative work theorizing experiential learning most recently has explored how this discourse has suppressed "transgressive identities and meanings" and a pre-Cartesian view of experience as "embodied, communal, and fruitfully incoherent" (p. 142). In the workplace, commonly acknowledged to be a dominant site where experiential learning and production are conflated, Usher and Solomon (1999) note that "the educational discourse of experiential learning intersects happily with the managerial discourse of workplace reform . . . in the cause of shaping subjectivity in ways appropriate to the needs of the contemporary workplace" (p. 162). In a time when an understanding of managed experiential learning is ascending as a primary animator of lifelong learning, the need to disrupt and resist reductionist, binary, individualized notions of experiential learning and pose alternate conceptions becomes urgent.

Thus, in this article, I seek to disrupt conventional notions of experiential learning and invite more discussion about alternative conceptions by comparing five perspectives of experiential learning. Here, *experiential learning* means a process of human cognition. The root of the word *cognition* in fact means "to learn," and thus the two terms are used interchangeably following standard usage within each perspective. I do not believe that the dimension of experience, broadly understood, is defensible as a classificatory signifier in cognition: What manner of learning can be conceived that is not experiential, whether the context be clearly educational or not? Experience embraces reflective as well as kinesthetic activity, conscious and

unconscious dynamics, and all manner of interactions among subjects, texts, and contexts. Experience flows across arbitrary denominations of formal and informal education, private and public sites of learning, and compliant and resistant meaning formation. If the category of *experiential learning* signifies nonschooled learning, then control and educators' presence are being reified as classifying dimensions. This creates a logical problem because educators created the category and thus are ipso facto, present in it. In any case, the category implies that some kinds of learning do not incorporate experience, which is an absurd proposition from any definitional viewpoint. Moreover, attempted divisions between human experience and reflection on that experience have proved problematic for all kinds of reasons that are later discussed.

However, the term *experiential learning* is used here because of its well-established tradition in adult education and to avoid epistemological arguments within broader constructs such as knowledge or cognition. I do not address theories of learning derived from behaviorism or cognitive science, nor do I enter debates about the nature and construction of theoretical or disciplinary knowledge. I am restricting my discussion to conceptions of knowledge calling themselves learning, that is, that situate themselves within a pedagogical frame theorizing some sort of intersection between situation, educator, and subject whose position is designated *learner* by virtue of a traceable developmental moment. In particular, I focus on contemporary perspectives on learning that are directly linked to individual and collective human actions and interactions, which I believe hold greatest promise for future research and practice in adult learning for reasons described in the following sections.

I am assuming, uncomfortably, the presence of an educator. This is because educational discourse such as this article gathers human activity, relations, and meaning making into the educator's gaze. However much we may resist, we educators are still and always attempting to configure ourselves in cognition's processes as active agents who ultimately manage processes we call learning from various positions: enhancing, directing, resisting, observing, or analyzing. Therefore, the phenomenon under study here is not simply the ongoing flow of meaning-making in which all individuals engage throughout life (and in which the politics of inserting educators at any point can be justifiably questioned). Instead, the perspectives represented in this article are framed as pedagogical theories of experiential learning: All share the assumption that certain experiences of cognition can be enhanced in ways that produce outcomes desired by the actors or learners involved.

Following this premise, these theories can be read pedagogically in at least the following two ways: as prescriptive basis for instructional design and intervention and as descriptive or interpretive tools for understanding learning environments. However, within this frame, enhancement does not necessarily have to mean application of theory as pedagogical method. Pitt, Robertson, and Todd (1998) show how theory of cognition can be read with the educational impulse, focusing on how theory and education can be read together. From a reading-with position, perpetual inquiry can be opened into the conditions and meanings of teaching and learning,

and traditional notions of theory-practice gaps can be subverted. This third way of reading is the position I have adopted in this article.

To this end, this article offers a summary of the reflective constructivist view of experiential learning and then presents comparatively four additional distinct currents of thought that have emerged in recent scholarly writing addressing (experiential) learning and cognition. These perspectives were selected for discussion here either because of their prominence in recent writing about learning and development or because they offer an original perspective on the relationships between experience, context, mind, and learning that may raise helpful questions about the dominant constructivist view. Space considerations mitigate against a comprehensive analysis of any particular perspective, and in most cases, extended discussion of each is available elsewhere. My purpose is to present only a brief overview for comparative purposes to honor and clarify different perspectives along similar questions of learning so that dialogue among them may continue.

ON CLASSIFICATION

Some rationale and discussion of the classificatory choices governing this article is warranted. I have avoided categories such as *individual*, *sociocultural*, or *integrated* theories because these divisions imply a natural separation between individuals and environment, when in fact the theories represented here each incorporate elements of individual psychology in relation to sociocultural environment (although they emphasize different apexes of the relationship). Also, I have tried to avoid using dimensions of understanding derived from one frame that may prove nonsensical when imposed on another. For example, to look for a theory's view of the learner presupposes that there are boundaries between knower, knowledge, and different contexts that need somehow to be cognitively traversed: Those perspectives that deny such a premise would therefore appear to be deficient.

Here in fact lies one of the central problematics in creating any typology. The different categories presented here may appear as natural and given, when in fact they are highly constructed. All dimensions of classification derive from some perspective held and imposed by the classifier, thus constructing a world arranged according to the preferred order of things derived from the classifier's viewpoint. In this assertion, I simply admit the constraints of my own logic. In particular, Western classificatory logic embeds its knowers with the deep assumption that there is such a logic, seeking to know the differences between things, and to separate them accordingly. I cannot presume to hide my own interests in cognition and my own preferences for particular learning theories behind these dimensions as if they are neutrally presented simply as different types. I am also aware that my own desires for conceptual control are reflected in the act of rendering these perspectives as manageable, comparable threads of intellectual thought.

I have tried to avoid classificatory hierarchies, although the placing together of particular strains of thought inevitably subsumes subtle distinction under broad characteristics. Some readers, for example, may be perturbed at the broad category

here termed *critical cultural theory*, which represents those perspectives in critical pedagogy, feminist theory, poststructural theory, postcolonial studies, and others that draw attention to issues of power and discourse because these configure knowledge environments. Certainly, it can be argued that each of these currents of thought deserve separate attention and perhaps are incommensurable in one category. Similarly, one can argue that enactivism and situated cognition, being relatively less prominent in adult education practice to date and similar in kind, should be collapsed into a single category.

My reasoning for presenting the categories as they are again relates to the educational purposes and audience of this typology. Many perspectives in critical cultural theory have enjoyed widespread interest, attention, and dissemination in adult education literature. I believe that greater service is provided at this point by showing similar broad patterns among these perspectives than contributing further to the voluminous scholarly literature delineating their subtleties and respective utility. Meanwhile, the enactivist theory of learning, although certainly not new, has only recently been incorporated in pedagogy theorizing in North America.¹ My concern is that newcomers to enactivist theory may automatically associate it with situated cognitive theory when in fact there are important distinctions.

The five currents of thought selected have been given descriptive titles for purposes of reference in this article, which should not be understood as formally designated theory names. These titles are the following: reflection (a constructivist perspective), interference (a psychoanalytic perspective rooted in Freudian tradition), participation (from perspectives of situated cognition), resistance (a critical cultural perspective), and co-emergence (from the enactivist perspective emanating from neuroscience and evolutionary theory). These five perspectives are each described briefly in the sections that follow, outlining their view of knowledge, learning, and teaching; their understanding of relations between knower, culture, and knowledge; implied roles for educators; and critiques and questions raised by other perspectives.

I have also, with some trepidation, included a chart to summarize the positions of the five perspectives on each of eight dimensions (see the appendix). The eight dimensions are the following: focus, basic explanatory schemata, view of knowledge, view of relation of knower to object and situation of knowing, view of learning process, view of learning goals and outcomes, view of the nature of power in experience and knowing, and view of the educator's role, if any, in learning. These dimensions were suggested by other classifications of cognitive perspectives: Greeno's (1997) response to debates about the nature of situated knowing; Davis and Sumara's (1997) comparison of cognitivism, constructivism, and enactivism; and Mezirow's (1996) discussion of three contemporary paradigms of learning. I know well the multiple problems and ironies of such a chart appearing in an article such as this. Besides the reductionist, binary, and reificatory logic that apparently construct it is the specter of its reproduction and distribution as a pedagogical tool, stripped of the important complexities and inner contestations that I fervently hope will bubble heatedly in any dialogue precipitated by display of this chart.

In more general terms, any typology such as this makes compromises to produce a certain clarity. The focus on a limited number of dimensions eliminates other dimensions that some may consider significant. It also eliminates the ability to examine rich details of the subtleties, differences, and interactions among these currents of thought. Naturally, there is an inherent difficulty in applying any single dimension to interpret multiple perspectives. However much I have sought to use analytical dimensions that allow representation of significant characteristics of each theoretical perspective, each perspective is its own world with its own defining schemata. In fact, within its own world, any single perspective here would subsume, interpret, and classify the others in particular ways.² Even the act of comparing one with another is potentially problematic. The equalized side-by-side representation of these categories masks the differential influence each wields on adult education practice, social theory, and on each other.

Despite all of the problems attending the comparative presentation of different theoretical perspectives in the ways that I have chosen here, I nonetheless believe in the possibilities it affords to interrupt and extend our thinking about teaching and learning. This is a temporary classification, a starting point intending to illuminate interstices where points of discussion may be opened. Its limitations may hopefully be overlooked in face of its potential usefulness. If it is possible to read our educational practice and theories of learning with these alternate perspectives, I trust that we may come to a place that “teaches us to think beyond our means” (Felman, 1987, p. 15).

REFLECTION (A CONSTRUCTIVIST PERSPECTIVE)

This prevalent and influential adult learning theory casts the individual as a central actor in a drama of personal meaning-making. The learner reflects on lived experience and then interprets and generalizes this experience to form mental structures. These structures are knowledge, stored in memory as concepts that can be represented, expressed, and transferred to new situations. Explanations in this perspective inquire into ways people attend to and perceive experience, interpret and categorize it as concepts, and then continue adapting or transforming their conceptual structures or “meaning perspectives” (Mezirow, 1990).

Constructivism has a long and distinguished (although by no means homogeneous or monolithic) history (Piaget, 1966; Von Glaserfeld, 1984; Vygotsky, 1978; Wells, 1995), portraying learners as independent constructors of their own knowledge with varying capacity or confidence to rely on their own constructions.³ However, all views share one central premise: A learner is believed to construct, through reflection, a personal understanding of relevant structures of meaning derived from his or her action in the world. Piaget (1966) described this construction process as oscillating between assimilation of new objects of knowledge into one’s network of internal constructs and accommodation of these constructs in response to new experiences that may contradict them.

In literature of adult learning, this reflective view is embedded in the writings of Boud and Miller (1996), Kolb (1984), MacKeracher (1996), Mezirow (1990),

Schon (1983), and many others. Schon, in particular, has been a significant promoter of constructivism to understand workplace learning, arguing that practitioners learn by noticing and framing problems of interest to them in particular ways, and then inquiring and experimenting with solutions. Their knowledge is constructed through reflection during and after this experimental action on the ill-defined and messy problems of practice. Brookfield (1987) and Mezirow (1990) have made considerable contributions to constructivist views of adult learning by theorizing how critical reflection interrupts and reconstructs human beliefs. Brookfield shows how both skeptical questioning and imaginative speculation can reflect on memoried experience to refine, deepen, or correct adults' knowledge constructions. Mezirow (1996) has continued to argue that an individual's reflection on fundamental premises opens meaning perspectives that are more "inclusive, differentiating, permeable, critically reflective, and integrative of experience" (p. 163).

Critique From Other Perspectives

Critics such as Britzman (1998a) and Sawada (1991) maintain that the reflective constructivist view is somewhat simplistic and reductionist. It reifies rational control and mastery, which feminist theorists of workplace learning have criticized as a eurocentric, masculinist view of knowledge creation (Hart, 1992; Michelson, 1996). Constructivism also does not provide any sophisticated understandings of the role of desire in learning, a foundational principle according to psychoanalytic theory, despite its central tenet that a learner's intention guides the inquiry process. The focus on rational concept formation sidesteps the ambivalences and internal vicissitudes bubbling in the unconscious, which according to Britzman (1998a), direct our interpretations and therefore our meaning making or experience in unpredictable ways. (This view is more fully developed in the Interference section.) Sawada (1991) argues that "reflection as processing" reinforces a conduit understanding of learning, relying on an old input-output metaphor of learning in which the system becomes input to itself. Furthermore, constructivism falsely presumes a cut universe in which subjects are divided from environment and from their own experiences, and reflection is posited as the great integrator, bridging separations that it creates instead of reorienting us to the whole.

The constructivist view considers the individual a primary actor in the process of knowledge construction and understanding as largely a conscious, rational process. Clark and Dirkx (in press) show that in this dominant humanist view, the learner is assumed to be a stable, unitary self that is regulated through its own intellectual activity. Access to experience through rational reflection is also assumed, as is the learner's capacity, motivation, and power to mobilize the reflective process. As will be shown later in this article, this view of the learning self is challenged by psychoanalytic, situative, and enactivist perspectives.

From a feminist perspective, Michelson (1996) observes that emphasis on (critical) reflection in workplace pedagogical activities such as Prior Learning Assessment depersonalizes the learner as an autonomous rational knowledge-making self,

disembodied, rising above the dynamics and contingency of experience. The learning process of reflection presumes that knowledge is extracted and abstracted from experience by the processing mind. This ignores the possibility that all knowledge is constructed within power-laden social processes, that experience and knowledge are mutually determined, and that experience itself is knowledge driven and cannot be known outside socially available meanings. Furthermore, argues Michelson (1996), the reflective or constructivist view of development denigrates bodily and intuitive experience, advocating retreat into the loftier domains of rational thought from which raw experience can be disciplined and controlled.

The emphasis on conscious reflection also ignores or makes invisible those psychic events that are not available to the conscious mind, including the desires and position of the reflecting "I" respective to the reflected-on "me" being constructed as a container of knowledge. Meanwhile, constructivism does not attend to internal resistances in the learning process, the active "ignore-ances" that Ellsworth (1997) contends are as important in shaping our engagement in experience as attraction to particular objects of knowledge. The view that experience must be processed through reflection clings to binaries drawn between complex blends of doing and learning, implicit and explicit, active and passive, life experience and instructional experience, and reflection and action (most notably in Kolb's [1984] depiction of perceiving and processing activities conceived as continuums from concrete to abstract engagement).

In constructivism, context is considered important but separate, as if it were a space in which an autonomous learner moves rather than a web of activity, subjectivities, and language constituting categories such as learner. A particular context of learning presents possibilities from which learners select objects of knowing; thus, context influences both the content of experience and the ways people respond to and process it. However, in the constructivist view, the learner is still viewed as fundamentally autonomous from his or her surroundings. The learner moves through context, is in it and affected by it, but the learner's meanings still exist in the learner's head and move with the learner from one context to the next. Knowledge is thus a substance, a third thing created from the learner's interaction with other actors and objects and bounded in the learner's head. Social relations of power exercised through language or cultural practices are not theorized as part of knowledge construction. This is a fundamental distinction between constructivism and other views presented in this article.

INTERFERENCE (A PSYCHOANALYTIC PERSPECTIVE)

Psychoanalytic theory has been taken up by educational theorists, in addition to other cultural critics of the late 20th century, to help disrupt notions of progressive development, certainty of knowledge, and the centered individual learner. Psychoanalytic theory also helps open ways of approaching the realm of the unconscious, our resistance to knowledge, the desire for closure and mastery that sometimes governs the educational impulse, and enigmatic tensions between learner, knowledge,

and educator. The field of psychoanalytic theory is broad. In contemporary educational writing, analyses draw on both Freud and Jung, and what Donald (1991) calls "feminist re-reading of Lacan's rereading of Freud" (p. 2). Curriculum theorists Pinar (1992) and Grumet (1992) worked from psychoanalytic theories to invite interest in autobiography as a space of writing within which learning's conflicts between personal myths from outside, and personal fictions from inside, could be engaged.

Recently, there has been what Pitt et al. (1998) describe as an "explosion of psychoanalytic consideration of matters curricular and pedagogical" (p. 6). One of the more prominent explorations they identify are the individual's relations between the outside world of culture and objects of knowledge and the inside world of psychic energies and dilemmas of relating to these objects of knowledge. Object relations theory, as Klein (1964) has explained, shows how the ego negotiates its boundaries with these objects.⁴

These knowledge dilemmas unfold through struggles between the unconscious and the conscious mind, which is aware of unconscious rumblings but can neither access them fully nor understand their language. Britzman (1998b) describes the unconscious as an "impossible concept" that cannot be educated: It "knows no time, knows no negation, knows no contradiction. . . . We do not address the unconscious, it addresses us. But its grammar is strange and dreamy; it resists its own unveiling" (p. 55). The conscious mind, on the other hand, is both ignorant and partially aware of its own ignorance. The consciousness is thus anxious about its own uncertain, impartial knowledge and ability to know, fragile in its own boundaries and existence, and often resistant to learning. The resulting negation or repression of certain knowledges holds particular interest for psychoanalytic educational theorists.⁵

Britzman's (1998a) theory, following Anna Freud, views learning as interference of conscious thought by the unconscious and the uncanny psychic conflicts that result. Our desires and resistances for different objects, which we experience as matters of love and hate, attach our internal world to the external social world. Our daily, disturbing inside-outside encounters are carried on at subtle levels, and we draw on many strategies to ignore them.⁶ But when we truly attend these encounters, we enter the profound conflicts, which are learning. The general learning process is crafting the self through everyday strategies of coping with and coming to understand what is suggested in these conflicts.

Although the unconscious cannot be known directly, its workings interfere with our intentions and our conscious perception of direct experience. These workings constantly bother the ego, producing breaches between acts, thoughts, wishes, and responsibility.⁷ Despite the ego's varied and creative defenses against confronting these breaches, the conscious mind is forced to notice random paradoxes and contradictions of experience and uncanny slips into sudden awareness of difficult truths about the self. These truths are what Britzman (1998a) calls "lost subjects," those parts of our selves that we resist and then try to reclaim and want to explore but are afraid to. True knowledge of these lost subjects jeopardizes the ego's

conscious sense of itself, its loves, and its knowledge. But, for the self to be more than a prisoner of its own narcissism, it must bother itself and notice the breaches between acts, thoughts, dreams, waking, wishes, and responsibility. We learn by working through the conflicts of all these psychic events. Experiential learning is thus coming to tolerate one's own conflicting desires while recovering the selves that are repressed from our terror of full self-knowledge.

The role of the educator from this psychoanalytic view is a problem because its impulse is to solve the problem of these conflicts. But these conflicts are not knowledge deficits or insufficiently developed meaning perspectives to be liberated through conscious critical reflection or an educator's intervention. Britzman (1998a) deplores education's urgent compulsion to emancipate and produce learners' change. She argues that such pedagogy often represses psychic conflict in its intolerance of complex individual learning processes of "working-through." Education instead, Britzman (1998a) claims, should help a person come to know and value his or her self's dilemmas as elegant problems and allow space and time for workings-through. The conditions and dynamics for the slow, difficult, and interminable work of learning itself are what should be at stake, not content or particular versions of cognitive change.

Thus, educative conditions would promote interference, botherings of the conscious mind, interruptions of the sense of truth, and, ultimately, anxiety. Felman (1987) argues that education's dream of absolute completion of knowledge in a fully conscious knower is impossible because the unconscious "is a kind of unmeant knowledge that escapes intentionality and meaning, a knowledge spoken by the language of the subject, but that the subject cannot recognize, assume as his, appropriate" (p. 77). In fact, Felman (1987) points out that the powerful dynamic between learner and educator in which the learning conflicts unfold is formed between the relation of one unconscious to another and is unknowable to both. To learn, people need to be deliberate experimenters in their own learning, willingly engaging in traumas of the self.

Critique From Other Perspectives

From a rational constructivist perspective, Mezirow (1990) acknowledges the perturbations of the unconscious, usually inaccessible to the reflective conscious mind, which often catalyze transformative learning. However, he asserts the primacy of reason and the need to control and subvert through critical reflection and communicative dialogue those dysfunctional habits of mind leading to undesirable actions. As rational beings, we can overcome our logical contradictions and unjustified or inarticulate beliefs (Mezirow, 1996), which psychoanalytic theory asserts must be simply accepted as interminable dilemmas. In other words, learning is more than just a process of working-through; it is working toward idealized mental frames of reference and beliefs that can be validated.

Situative perspectives, described in the next section, might argue that psychoanalytic theory dwells too strongly on the internal, with insufficient attention paid to the systems that bind the changing human mind and its psychic traumas to its changing contexts. Lave (1988) points out that context is frequently undertheorized as some kind of container into which individuals are dropped. The context may be acknowledged to affect the person, but the person is still viewed as an autonomous agent of knowing with his or her own psychic systems, which are still viewed as fundamentally distinct from other contextual systems. Furthermore, the psychoanalytic view seems to assume that learning can take place entirely as a mental process, regardless of patterns of participation in continuously evolving communities. Psychoanalytic views may mistake learning and doing, individuals and the symbolic tools and communities of their activities, as separable processes.

Critical cultural views of learning, described in more detail in the Resistance section, might well take up a moral question with psychoanalytic learning theories: Are all workings-through to be honored and encouraged? How can we envision alternate possibilities if all knowledge floats according to an individual's own psychic disturbances? Agency is a contested issue in any learning theory but, perhaps, particularly in psychoanalytic theory. Pushed to extreme in the direction to which it points, this perspective may leave people in interminable ambivalence. Some theorists mobilized by a critical cultural impulse would likely find it difficult to tolerate this position.

PARTICIPATION (A SITUATIVE PERSPECTIVE)

An alternate view of learning is proposed by situative perspectives (Brown, Collins, & Duguid, 1989; Greeno, 1997; Lave & Wenger, 1991; Rogoff, 1990). *Situated cognition* maintains that learning is rooted in the situation in which a person participates, not in the head of that person as intellectual concepts produced by reflection nor as inner energies produced by psychic conflicts. *Knowing* and *learning* are defined as engaging in changing processes of human activity in a particular community. Knowledge is not a substance to be ingested and then transferred to new situation but, instead, part of the very process of participation in the immediate situation.

Lave and Wenger (1991) argue that the understanding that emerges in and helps a person to participate in a situation are intimately entwined with the particular community, tools, and activity of that situation. In other words, individuals learn as they participate by interacting with the community (with its history, assumptions and cultural values, rules, and patterns of relationship), the tools at hand (including objects, technology, languages, and images), and the moment's activity (its purposes, norms, and practical challenges). Knowledge emerges as a result of these elements interacting. Thus, knowing is interminably inventive and entwined with doing (Lave, 1988).

Because knowledge flows in action, it can be neither commodified as a conceptual substance nor considered as centered in any way within individual subjects. Pile and Thrift (1995) argue that, first, understanding is created within conduct itself, which flows ceaselessly, is adaptable but not often deliberately intentional, and is always future oriented. Second, understanding is worked out in joint action with others through shared but not necessarily articulated understandings of "what is real, what is privilege, what is problem, and what is moral" (p. 24).⁸ Thus, the process of knowing is essentially corporeal, realized through action, and, therefore, often worked out in a domain beyond consciousness. This fundamentally challenges the belief that individual reflection and memory is significant in knowledge production.

Transfer of knowledge then becomes problematic; but as A. Wilson (1992) points out, adults do not learn from experience, they learn in it. He writes, "If we are to learn, we must become embedded in the culture in which the knowing and learning have meaning: conceptual frameworks cannot be meaningfully removed from their settings or practitioners" (p. 77). Each different context evokes different knowings through very different demands of participation. This means that training in a classroom only helps develop a learner's ability to do training better. What is learned in one training or work site is not portable but is transformed and reinvented when applied to the tasks, interactions, and cultural dynamics of another. As Sfard (1998) explains, the notion of "knowledge transfer" implies carrying knowledge across contextual boundaries, but when neither knowledge nor context are viewed as clearly delineated areas, "there are no definite boundaries to be crossed" (p. 9).

Truth claims also become problematic in situative views. Here, knowledge is not judged by what is true or false or what is erroneous but by what is relevant in this particular situation, what is worth knowing and doing, what is convenient for whom, and what to do next (Lave & Chaiklin, 1993). The emphasis is on improving one's ability to participate meaningfully in particular practices and moving to legitimate roles within communities. *Meaningful* must be negotiated between the individual's desires and intentions (including the desire to belong) and the community's changing requirements for certain forms of participation. Situated theorists focus their continuing inquiry on questions such as the following: What constitutes meaningful action for a particular individual in a given context? How is the development of knowledge constrained or created by the intersection of several existing practices in a particular space (Lave & Wenger, 1991)?

The educator's role is not to develop individuals but to help them participate meaningfully in the practices they choose to enter. Greeno (1997) characterizes this pedagogical goal as improved participation in an activity. People improve by becoming more attuned to constraints and affordances of different real situations. The educator may arrange authentic conditions and activities in which the learners practice interacting. When people learn to notice how specific properties and relations influence their possibilities for acting in one situation, they can more easily transform that activity in a wider range of situations (Greeno, 1997). However,

Greeno's (1997) portrayal of the helping educator contradicts certain premises of situated cognition, for the deliberate insertion of an actor with particular intentions changes the purpose and flow of the activity. Educators cannot regard their own participation separately from the overall negotiation of the question, What constitutes meaningful participation in this community?

Others claim the pedagogical value of the situated perspective is to illuminate how different elements of a learning environment interact to produce particular actions and goals. Following this, B. G. Wilson and Myers (1999) propose the following questions for educators: "Is the learning environment successful in accomplishing its learning goals? How do the various participants, tools and objects interact together? What meanings are constructed? How do the interactions and meanings help or hinder desired learning?" (p. 242). Sfard (1998) points out that the participation metaphor invokes themes of togetherness, solidarity, and collaboration, which could promote more positive risk taking and inquiry in learning environments. Furthermore, the situative perspective emphasizes being in constant flux, which avoids any permanent labeling of people.

For the learner, all options are always open, even if he or she carries a history of failure. Thus quite unlike the [acquisition of knowledge] metaphor, the [participation metaphor] seems to bring a message of an everlasting hope: Today you act one way; tomorrow you may act differently. (p. 8)

Critique From Other Perspectives

Some constructivist learning theorists have argued that the situative claims are misguided and overstated in their insistence that knowledge is context dependent (Anderson, Reder, & Simon, 1996). These critics claim that the extent to which learning is tightly bound to context depends on the kind of knowledge being acquired and the ways the material is engaged. *Transfer* is a legitimate construct: Learners have proved that they can master abstract knowledge in one context and apply this knowledge to a different context, argue Anderson et al. (1996). The key is to help people develop transfer skills during initial learning events and to remind and help learners in unfamiliar situations to adapt and apply concepts with which they are already familiar. Anderson et al. (1996) claim that what is truly important in learning is "what cognitive processes a problem evokes, and not what real-world trappings it might have" (p. 9).

Other critics have pointed out that not all learning in communities is laudable. Unsupervised people learning in authentic environments may make do, finding ways to participate that actually reinforce negative practices that a community is trying to eliminate. Salomon and Perkins (1998) argue that people who are apprenticed in particular ways may pick up undesirable forms of practice, wrong values, or strategies that subvert or profoundly limit the collective and its participating individuals.

A critical cultural perspective, described in the Resistance section, may well challenge the apolitical position of situated cognition. Relations and practices related to dimensions of race, class, gender, and other cultural and personal complexities, apparently ignored by situative theorists, determine flows of power, which in turn determine different individuals' ability to participate meaningfully in particular practices of systems. There appear not to be, among situative perspectives, satisfactory responses to certain fundamental ethical questions of learning that are posed by other perspectives: Whose knowledge, among the various participants in the system, is afforded the greatest influence over the movements and directions of the system?

The situative perspective also has yet to address the question of positionality of actors within a system. As Ellsworth (1997) explains, "Each time we address someone, we take up a position within knowledge, power, and desire in relation to them, and assign to them a position in relation to ourselves and to a context" (p. 54). Power flows through the system according to the way these positions are connected, the way they address one another, and the nature of the resulting space between the positions. The positions are in constant flux, for they change each time someone turns to a new activity or subject. In Lave and Wenger's (1991) work, a learner's positionality within a system was conceptualized simplistically as a general movement from the "peripheral participation" to the "centre" of a community. This notion would be viewed as problematic from critical cultural perspectives: It presumes the existence of an identifiable center and appears unconcerned with the governmentality of any system that accepts participation as hierarchical.

Situated perspectives also seem silent on the issue of resistance in communities in which tools and activities may be unfair or dysfunctional. Is such resistance also considered meaningful participation? Does the appropriation of all energies as participation, including those intending to disrupt and fundamentally change the system, in fact dilute their disruptive effect and ensure the continuation of the system? The situated view may be understood to assume that encouraging participation in the existing community is a good thing and thus provides few theoretical tools for judging what is deemed "good" in a particular situation or for changing a system's conventional flow of movement.

RESISTANCE (A CRITICAL CULTURAL PERSPECTIVE)

Critical cultural perspectives center power as a core issue. The problem with some situated views and systems-theory perspectives is their lack of attention to inevitable power relations circulating in human cultural systems. Any system is a complex site of competing cultures. To understand human cognition, we must, from a critical cultural perspective, analyze the structures of dominance that express or govern the social relationships and competing forms of communication and cultural practices within that system. Writers in critical cultural pedagogy (e.g., Flax, 1990; Giroux, 1992; Giroux & McLaren, 1994; Kellner, 1995) claim that

when these mechanisms of cultural power are named, ways and means to resist them appear. With resistance, people can become open to unexpected, unimagined possibilities for work, life, and development. A purely applied systems view of cognition free of historical, political, cultural, and gender concerns makes some vulnerable to those others intent on sustaining the discourses and practices that ensure their power.

As Foucault (1988) has shown, it is simplistic to conceive power as domination or as irrevocable forces that determine human activity. Critical cultural studies offer tools for tracing complex power relations and their consequences. The field is wide and certainly not monolithic, embracing pedagogical theorizing focused on gender issues, ideology and discourse analysis, media analysis, postcolonialism and subaltern studies, queer theory, race and identity, technoculture theory, and others. Obviously, many conflicting perspectives and emphases are involved. For the purpose of this brief section, no distinction will be made between these perspectives, although their heterogeneity should remain understood. Their writers all have in common their belief that politics are central to human cognition, activity, identity, and meaning. They often make explicit and demystify existing moment-to-moment interplays of power and advocate social reconstruction by seeking more inclusive, generative, and integrative alternatives to certain oppressive cultural practices and discourses.

Critical cultural perspectives suggest that learning in a particular cultural space is shaped by the discourses and their semiotics (signs, codes, and texts) that are most visible and accorded most authority by different groups. These discourses often create dualistic categories such as man/woman, reflection/action, learning/doing, and formal/informal, which determine unequal distribution of authority and resources. Such dualisms can result in labels that depersonalize human beings. They also legitimate certain institutions and exclude others by representing norms and casting nonconformists as "other" to these norms. Analysts such as Kellner (1995) analyze how such representations of people in cultural discourses contain, define, and control behavior and relations and generally limit the possibilities of people's identities. Young (1990) urges examination of the historical forces and mythologies that have shaped these discourses and representations, including the experiences and contributions of both winners and losers, as these are defined by a discourse.

Some critical educational writers have used Bourdieu's (1980) theory of cultural capital to analyze certain mechanisms of control that are hidden or unrecognized and often complied with and exercised by the subjects of the control. Critical writers ask, "What capital in this culture is accorded dominant status, and which group invests value in it?" Desired cultural and symbolic capital has interest and meaning for particular groups and requires particular cultural codes to understand and appreciate it. Knowledge itself and the categories that make it possible are capital invested with values. What is considered legitimate knowledge and how is it developed and exchanged? Which kinds and whose knowledge counts most?

Borders and boundaries are significant for critical cultural writers in different ways than for theorists of other perspectives in which boundaries between inner and outer worlds (psychoanalytic) or between individual knower and objects of the environment (constructivist) are of most interest. Giroux (1992), for example, analyzes borders thought to define cultural communities and territories, examining the identity options constructed for people within certain borders and the consequences for those who transgress. Chow (1993) examines blurrings of boundaries, discerning the tensions resulting from mixes and flows of cultures cross multiple spaces. Edwards and Usher (1998) are interested in ways location and dislocation function in people's learning, as new spaces for alternative cultural practices and identities are being opened by border crossings in this globalized world, where boundaries between real and virtual cultures and individual and collective experiences are increasingly blurred.

Postcolonialist writers claim that all of our histories and, therefore, our experiences and learning are entwined in some way with colonization. Education itself is a colonizing process. Colonization has depersonalized and dislocated colonial subjects, created new worlds from these oppressions (Spivak, 1988), produced multiple patterns of dissent (violent, pacifist, and withdrawal), and created complex histories and dependencies between colonizers and resisters (Said, 1993). Some writers suggest looking at the utopian traces that are inherent in any impulse to colonize others, which may provide clues to possibilities beyond the domination. Bhabha (1994) suggests that new hybrid knowledges and spaces are developing from our collective histories of colonial dominance and resistance. Very new meanings and visions emerge as possibilities for new futures in these spaces—if they can be discerned by those locked in reasoning patterns of the past.

In critical pedagogy processes, learners trace the politics and constraints of their contexts of experiential learning. Learning is coming to critical awareness about one's contexts as well as one's own contradictory investments and implications in what knowledge counts in particular communities, how development is measured, who gets to judge whom and why, and the interests that are served by resistant or development initiatives. Educators help themselves and others become more aware of their own constituted natures, their own continuous role in power relations and the production of meaning, how representations act to represent and construct reality, and how difference is perceived and enacted. People learn how what they may experience as personal yearnings, despair, conflict, and identity struggles are shaped partly by historical cultural dynamics and ideologies of particular communities.

Through critical pedagogy, groups of people (and their values) who have been lost or dislocated in rigid, narrow identity categories recover and name new subject positions. It must be understood, in terms of this article's focus on experiential learning, that although critical pedagogy is often situated in classrooms, it is also largely acknowledged to unfold in multiple nonformal sites of learning (i.e., consciousness-raising groups, movements of social activism, individual confrontation with texts that disrupt one's received views). People learn to see through accepted

social discourses to discern blurring borders and categories, new hybrid knowledges emerging, and even ultimate incommensurabilities of different cultural practices and groups. As Foucault puts it, “When we undermine their ‘naturalness’ and challenge the assumptions on which they’re based, we can see the possibility for difference . . . transformation becomes urgent, difficult, possible” (Foucault cited in Kritzman, 1988, p. 154). Giroux (1991) writes that critical pedagogy can open spaces to discern new futures, craft new identities, and seek social alternatives that may be obscured by current dominant ideologies and struggles.

Critique From Other Perspectives

There has been much criticism of emancipatory views of experiential learning. As Michelson (1999) observes, it is by now a commonplace understanding that experience, liberatory or otherwise, cannot be considered apart from “received meanings that evolve within material structures and cultural and discursive norms” (p. 141). Individuals are multiply positioned; our agency or potential for it changes across shifting contexts and fluid identities constructed and reconstructed in particular moments. Monolithic ideologies, social structures, and large-scale causal theories are deemed unworkable in the face of such fluid cultural expressions and practices (Bauman, 1992). Furthermore, we are inscribed by our cultures in such a way that our agency cannot be easily separated from our shifting implications and investments in the multiple communities and discourses of our everyday lives.

Such statements reflect a particular perspective commonly associated with postmodernism, a term of such ambiguity, differentiated connotations, and diverse philosophical expressions that I have thus far avoided using it altogether. But writers aligning themselves with postmodern views have provided thoughtful critique of the emancipatory understanding of learning. Their questions tend to focus on the irreconcilability of fixed notions of identity, subjectivity, culture, and transformation with the complexities of plurality, motion, and ambiguity that mark human activity and meaning making (see Lather, 1991, for an extended discussion of this point). Like Lather, many of these writers work within the critical cultural tradition to refine and expand this perspective without losing its commitment to resist oppression. This is an important point because it helps illustrate how this “resistance” perspective, like others discussed in this article, embraces contestation and continued self-interrogation in ways that blur its own definitional boundaries. Lather’s (1991) project, for example, was to theorize a defensible alignment between critical social theory and its poststructural challenges along political, social, and pedagogical grounds.

Overzealous cultural critique and reconstruction is a recurring pedagogical issue. Kellner (1995) cautions educators not to suppose a monolithic dominant ideology that is inherently manipulative or evil and to remember that people are not a mass of passive, homogeneous, noncritical victims of a dominant ideology. Feminist scholars have shown the repressive potential in any emancipatory efforts.

Ellsworth (1992), for example, is a well-known voice among many who have questioned the possibility of creating safe pedagogical spaces where open, equitable dialogue toward empowerment can unfold. She rejects the Habermasian ideal speech condition, arguing that subjects are not capable of being fully rational and disinterested, that multiple meanings are endemic, and that voices are contradictory and partial across and within subjects. Troubling issues about who presumes enlightenment and how authentic democratic participation can ever be achieved through existing discourses that favor certain knowledge interests over others have not been resolved. The impositional educator who presumes to determine what comprises false consciousness and then undertakes to replace it with a particular conception of resistance, for example, has been problematized at length (Lather, 1991). Educators' self-reflexivity, exploring their own intrusions and repressions and acknowledging their own inscription by dominant discourses and their own will to power, is not always apparent in critical pedagogy. In addition, there is the problem of where learners are left after so-called empowerment. Giroux (1991) has explored this issue of reconciling transformed consciousness with the demands of surviving the real politics of everyday life. When the educator (defined broadly: an impulse, text, or subject position) is granted such a central position in experiential learning, ethics and the limits of educators' responsibilities require address.

Britzman's (1998a) psychoanalytic view critiques the primacy of consciousness in the critical cultural perspective and claims that individual or collective critical reflection are highly limited means of coming to self-knowledge. Cultural analysis may not be viewed as attending sufficiently to the extraordinary significance of desire and the nuance of the unconscious in determining understandings and behaviors developed through experience. Our attempts at achieving deeper awareness by examining experience solely through rational critical thinking are thwarted by the ego's investments in maintaining its own narcissism. And, ultimately, the extraordinary faith placed in human ability to achieve emancipation through self-reflexivity has been questioned. Ellsworth (1997), for example, shows how the spaces between one's critical eye and one's own ideologies—themselves both shifting and fluid—are configured by multiple desires and positional investments and multiple contradictory readings.

Enactivists, whose ecological perspective of learning is more fully elaborated in the next section, do not tend to discuss power as a primary determinant of systems' evolution. Nor do they privilege cultural practices and discourses in theorizing emergence of physical and human expressions comprising community. Some reject as too deterministic the structural view of a dominant elite subordinating other groups or even of subjects regulating themselves through internalized regimes of truth and norms of cultural practice (Foucault, 1988). The dualism of individual and cultural embeddedness on which critical cultural perspectives premise the possibility of agency toward transforming self and culture is also rejected. Sumara, Davis, and Carson (1997) eschew entirely what they describe as traditional perspectives of

domination and oppression as perpetuating negative views of power. They explain that systems theories of learning place much greater emphasis on mutual affect, collectivity, and co-emergence, which transcend the limitations and self-perpetuated negative circles created by power and resistance-based critical thinking.

CO-EMERGENCE (THE ENACTIVIST PERSPECTIVE)

Enactivism is a theory explaining the co-emergence of learner and setting (Maturana & Varela, 1987; Varela, Thompson, & Rosch, 1991). This perspective of experiential learning assumes that cognition depends on the kinds of experience that come from having a body with various sensorimotor capacities embedded in a biological, psychological, cultural context. Enactivists explore how cognition and environment become simultaneously enacted through experiential learning. The first premise is that the systems represented by person and context are inseparable, and the second premise is that change occurs from emerging systems affected by the intentional tinkering of one with the other.

This understanding begins by stepping aside from notions of knowledge as a substantive thing to be acquired or ingested by learners as isolated cognitive agents, thereafter to exist within them. Davis and Sumara (1997) explain that, instead, enactivism accepts the premise that “cognition exists in the interstices of a complex ecology or organismic relationality” (p. 110). Humans are understood to form part of the context itself because they are completely interconnected with the systems in which they act. Maturana and Varela (1987) have represented the unfolding of this interconnection as a series of structural couplings. When two systems coincide, the perturbations of one system excites responses in the structural dynamics of the other. The resultant coupling creates a new transcendent unity of action and identities that could not have been achieved independently by either participant.

Educators might understand this phenomenon through the example of conversation, a collective activity in which interaction enfolds the participants and moves beyond them in a commingling of consciousness (Davis & Sumara, 1997). As each contributes, changing the conversational dynamic, other participants are changed, the relational space among them changes, and the looping back changes the contributor. This is mutual specification (Varela et al., 1991), the fundamental dynamic of systems constantly engaging in joint action and interaction. As actors are influenced by symbols and actions in which they participate, they adapt and learn. As they do so, their behaviors and thus their effects on the systems connected with them change. These complex systems shift with each change, changing their patterns of interaction and the individual identities of all actors enmeshed in them. Thus, the environment and the learner emerge together in the process of cognition, although this is a false dichotomy: There is no context separate from any particular system such as an individual actor.

The apparent similarity of enactivism with situated perspectives articulated by Lave and Wenger (1991) or Greeno (1997) rests in this primacy granted to environment as integrated with cognition, not simply supplemental to the individual consciousness. However, there are fundamental distinctions. Where situated cognition arose in the discipline of psychology, enactivism is rooted in evolutionary biology. Situated cognition is therefore anthropocentric, premised on and scrutinizing an individual subject who develops through a movement of participation in a community of practice. The interactions comprising participation form the integration of person and context, but autonomous subjectivity and the concept of individual mind remain privileged and fundamentally unchallenged. The person learns to participate more effectively by participating. Enactivism, on the other hand, is premised on ecological systems theory, understanding planetary evolution through multiple systems enmeshed in processes of self-organization and interdependence. Change (such as phenomena that other perspectives may observe as *learning*) occurs through disturbances amplified through feedback loops within and among systems. In its more radical enunciations (e.g., Varela et al., 1991), enactivism dissolves human subjectivity and its illusions of individual consciousness and ego at the systems level, for human processes apparently bounded by the individual body (perception, sensation, emotion, thought, digestion, etc.) can be each considered subsumed within larger systems.

Enactivism considers understandings to be embedded in conduct. Davis and Sumara (1997) explain this premise by drawing attention to the knowledge that we are constantly enacting as we move through the world. Often called "habit" or "tacit knowledge" by others, enactivists view these understandings as existing not within ourselves in ways that drive our actions but as unfolding in circumstances that evoke these particular actions. As an example, Davis and Sumara (1997) show how a choreography of movement can be discerned in a particular community in which individuals find themselves swept up in collective patterns of expectation and behavior. Their examples show how much of this joint action exceeds and leaks out of individual attempts to attend to and control unconscious action through critical reflection. The problem lies not in underdeveloped critical abilities that should be educated but in a false conceptualization of the learning figure as separate from the contextual ground. Enactivism draws attention to the background and examines myriad fluctuations, subtle interactions, imaginings and intuitions, the invisible implied by the visible, and the series of consequences emerging from any single action. All of these we normally relegate to the backdrop of our focus on whatever we construe to be the significant learning event. The focus of enactivism is not on the components of experience (which other perspectives might describe in fragmented terms such as *person, experience, tools, community, and activity*) but on the relationships binding them together in complex systems.

Learning is thus cast as continuous invention and exploration produced through the relations among consciousness, identity, action and interaction, and objects and structural dynamics of complex systems. There is no absolute standard of conduct because conduct flows ceaselessly. Maturana and Varela (1987) suggest that

subsystems in a series of increasingly complex systems together invent changing understandings of what is “adequate conduct” in this particular time and situation, or “consensual domain” (p. 39). *Adequate conduct* is action that serves a particular consensual domain. New possibilities for action are constantly emerging among the interactions of complex systems, and thus cognition occurs in the possibility for unpredictable shared action. Knowledge cannot be contained in any one element or dimension of a system because knowledge is constantly emerging and spilling into other systems.

In analyzing a process through which a group learned and changed over time, Sumara et al. (1997) show the usefulness of enactivism as an explanatory tool. They describe how systems of cognition and evolution interacted in spontaneous, adaptable, and unpredictable ways that changed both, resulting in “a continuous enlargement of the space of the possible” (p. 303). In other words, people participate together in what becomes an increasingly complex system. New unpredictable possibilities for thought and action appear continually in the process of inventing the activity, and old choices gradually become unviable in the unfolding system dynamics.

The enactivist perspective insists that learning cannot be understood except in terms of co-emergence: Each participant’s understandings are entwined with the other’s, and individual knowledge co-emerges with collective knowledge. Educational theory also must examine the subtle particularities of context created through the learning of complex systems and embedded in their constantly shifting interactional dynamics and the relations among these particularities. Educators need to become alert to a “complexified awareness . . . of how one [individual] exists simultaneously in and across these levels, and of how part and whole co-emerge and co-specify one another” (Davis & Sumara, 1997, p. 120). Educators can also help learners understand their involvement and find honest ways to record the expanding space and possibilities. The following questions for facilitators are offered by Sumara et al. (1997): How does one trace the various entangled involvements in a particular activity in a complex system while attending assiduously to one’s own involvement as participant? How can the trajectories of movement of particulate actors in relation to the system’s objects be understood and recorded in a meaningful way?

The educator’s first role might be as a communicator, assisting participants to name what is unfolding around them and inside them, to continually rename these changing nuances, and to unlock the tenacious grasp of old categories and restrictive or destructive language that strangles emerging possibilities. Second, the educator as a story maker helps trace and meaningfully record the interactions of the actors and objects in the expanding spaces. Third, educators as interpreters help learners to make sense of the patterns emerging among these complex systems as well as to understand their own involvements in these patterns. Naturally, educators must be clear about their own entanglement and interests in the emerging systems of thought and action.

Critique From Other Perspectives

This enactivist perspective has joined the debate about experiential learning so recently that critique has not yet become available in educational literature. However, working from basic premises of other perspectives, some challenges can be formulated to the enactivist perspective in anticipation of a critique that will no doubt emerge in future writing.

Challenges from a constructivist view might focus on the lack of full recognition accorded to individual meaning-making and identity-construction processes. Although Davis and Sumara (1997) claim that personal subjectivities are by no means abandoned but, rather, understood as mutually specifying one another, it is unclear how individual integrity is maintained in a "commingling of consciousness" (p. 110). Enactivists pose a rather seamless link between cognition and interaction in community. Constructivists would argue that there are aspects of an individual's subjective world of cognition that are available through dialogue but not present in action. As well, the connection to one particular context of individuals' personal histories and their dynamic processes of change and growth within other systems are not yet fully articulated in the enactivist understanding. Finally, the relationship of individual knowers to theoretical knowledge existing apart from a particular community of actions also must be articulated.

Ethical issues of justice and right action, fundamental to education, become somewhat problematic in the enactivist perspective as presented here. How can an educational project for change be formulated that adequately accounts for the complexified ongoing systemic perturbations without being deliberately illusory? That is, if any action of an educator or other particular element of a system becomes enfolded in that system's multiple interactions and unpredictable expansions of possibility, what sort of reference point can be used to guide intention toward some deliberate pedagogical goal? On another point, how can we explain the differential change that different elements of a system appear to register? If all interactions between people co-emerge in ways that specify each other, how is it that educators often influence learners more than they are influenced in their interactions? Finally, what moral choices for wise judgment are available for educators within notions such as adequate conduct? Because they are self-referenced (Waldrop, 1992), complex systems that many educators would abhor do often survive and expand in sustainable ways. Cancer and neo-Nazism are two examples. There must be a more defensible framework than simply co-emergence to guide understandings of cognition. These questions are not obstacles or reasons to reject enactivist perspectives of cognition. They simply serve to point out further paradoxes that must be named as educators struggle to find ways to act within complexity.

Challenge to the enactivist view from a critical cultural perspective may observe that discussion of experiential learning is inseparable from cultural practices, social relations, images, and representations. Perspectives such as enactivism do not address inevitable power relations circulating in human cultural systems. Therefore, the influences on patterns of co-emergence exerted by culturally determined meaning categories such as gender, race, sexuality, class, and religion may be

indiscernible from a systems perspective. In addition, neither systems nor situative perspectives appear to attend to the way cultural practices (such as tools of discourse, image, and representation) have been shaped and maintained by dominant groups in the system and continue to sustain interests of some participants in the system more than others. Furthermore, a systems view such as enactivism demands that the interests and identities of individual elements be surrendered to the greater community. Therefore, individuals become vulnerable to a few who manipulate the system's discourses to sustain their own power, ensuring that their experiences become the most valued knowledge in the collective.

CONCLUSION: IMPLICATIONS FOR THEORIZING THE NATURE OF EXPERIENTIAL LEARNING

A careful comparison of theoretical frames is needed to help researchers and educators better understand and name the various processes occurring as experiential learning and constitute their own roles relative to these processes in moral, sensitive ways. The perspectives highlighted by this article may help interrupt dominant views of experiential learning as reflective knowledge construction and open spaces for dialogue between situative and enactivist, constructivist, critical, and psychoanalytic voices. These perspectives can also move us toward developing more robust theoretical tools for experiential learning that integrate themes within the issues of reflection, interference, participation, power, and co-emergence as they are raised by different perspectives. Meanwhile, comparative examination of different perspectives can enlighten and raise new questions for each perspective as well as help researchers, theorists, and educators situate and think carefully about beliefs of experience and learning underpinning their own practice.

Producing a synthesis of these five perspectives in terms of their implications for educators is both impossible and theoretically unsound. Each view enfolds a different understanding of the positioning of educators, learners, and learning and of the relationship between theory of learning and the practice of teaching. Alternatively, one might try transcendence to a domain of theoretical eclecticism, which, as B. G. Wilson and Myers (1999) argue, is most often the stance of the practitioner.

Practitioners tend to be opportunistic with respect to different theoretical conceptions: they might try viewing a problem from one theoretical perspective, then another, and compare results. This stance might be termed "grab-bag" but we prefer to think of it as problem- or practitioner-centered. People, rather than ideologies, are in control. The needs of the situation rise above the dictates of rules, models, or even standard values. (p. 248)

However, even this view of a single actor choosing to apply particular ideas to actions according to the particular demands of the immediate context is itself located within one perspective, the situative view, which others might reject as inadvisable, impossible, or theoretically inaccurate as a representation of what that actor may think he or she is doing. Indeed, certain streams of constructivism would

question the cognitive possibility of paradigm hopping, and certain theories of epistemology would not accept the theoretical assumption that perspectives derived from fundamentally disparate worldviews can ever be integrated or even adequately represented side-by-side as I have presumed to do here.

But now that I have pulled apart these five different views of learning and represented them as a chart for purposes of some clarification, discussion should proceed to deconstruct the chart itself, its classificatory dimensions, and its influence in constructing ways of thinking, perhaps experimenting with alternate ways of understanding and representing these and other learning perspectives. There are many possible readings and combinations of themes within perspectives. For example, perspectives sharing a subject-centered philosophy of consciousness (reflection and some emancipatory views of resistance) can be counterpoised to conceptions that decenter the subject (participation, co-emergence, and poststructural perspectives of resistance). Enactivism resonates with psychoanalytic theory on some dimensions and situated cognition on others. B. G. Wilson and Myers (1999) argue that situated cognition actually embeds fundamental premises of early behaviorist theory, whereas A. Wilson (1992) shows its alliance with critical theory. Some streams of critical cultural theory align with constructivist notions of cognition, others with psychoanalytic or poststructural theories.

The further challenge is to examine the omissions, links, and blurrings among these perspectives and to locate points where they already agree or where they may complement one another. More in-depth comparisons should identify and probe, with careful analysis of terms and conditions, points of complete disagreement or incommensurability. These points of controversy may help us choose the most imminent questions for our further inquiry into the nature of experiential learning. Discussion should then open exploration of the movements within and between the perspectives, examining the contradictory currents, mutual influences, and relationship of different perspectives to broader sociocultural movements in thought. Finally, in contexts of adult education, discussion might explore possible roles for educators within different perspectives and the problem of inserting this role.

This typology now needs to be challenged and unraveled. Charts such as the appendix that pretend to totalize distinct currents of thought and pedagogical energies must themselves be disrupted, put off balance. I cannot find a way to do this while clarifying these ideas in a way that will not dissolve into incomprehensible and interminable denial of the ideas themselves. Therefore, I invite my colleagues in adult education to challenge and debate or extend and modify the five perspectives of experiential learning as I have represented them here.

APPENDIX

<i>Perspective</i>	<i>Focus and Key Questions</i>	<i>Explanatory Schemata</i>	<i>View of Knowledge</i>	<i>Relation of Learner to Object/ Context of Knowing</i>
Reflective (constructivist)	Individuals construct meanings from their experiences to produce knowledge.	Processes and structures of perception, memory, belief structures, and interpretation. Reflective analysis of personal assumptions. Processes of belief transformation.	Individual mind: A set of mental constructs that can be represented, expressed, and transferred to new situations.	Learner inquires and experiments guided by personal intention. Situation presents possibilities from which learner selects objects of knowing.
Interference (psychoanalytic)	The self: How it is crafted, repressed, recovered, and understood. How does the unconscious interfere with conscious thought to produce knowledge?	Unconscious desires and insights. Ego's self-protective defenses. "Vicissitudes of love and hate in learning." Internal conflicts.	Passionate tensions of love and hate. New versions of old conflicts. Dynamic psychological events.	One's internal conflicts are new versions of old cultural conflicts. Internal world is attached to outside (social) through matters of love and hate. Inside-outside encounters produce the conflicts, which are learning.
Participation (situative)	Practices in which individuals have learned to participate. What constitutes meaningful action for a particular individual in a given context? How do people learn adaptively in situations in which they engage in activities?	Interactive systems, including individuals as participants. Properties of social practices: collaborative work, distribution of accountability and authority, information sources, and characteristics of interaction.	Participation with increasing effectiveness. Knowledge is not judged by what is true or erroneous but by what is relevant here, what is worth knowing and doing, what is convenient for whom, and what to do next in this particular situation.	Social and individual skills and activities are inseparable. Knowing does not exist apart from the tools, community, and activity of a particular situation.
Resistance (critical cultural)	How does power circulate to repress or enhance experience and learning? How is identity limited or liberated by prevailing cultural codes?	Cultural practices, cultural capital, and discourses; the regulation and distribution of authority and resources. Experience as shaped by the circulation of power, the interests of dominant groups, and the resistance of other groups.	Knowledge is emancipation from passive acceptance of received identities and dominant cultural structures. Knowledge is expressed through resistance (in voice, action, or silence).	Learner's positionality is political. Power relations determine learner's relation to situation and object of knowing.
Co-emergence (enactivist)	Co-emergence of systems (learner, setting). How do cognition and environment become simultaneously enacted?	Dense interconnections at subsystem levels. Internal coherence in intricate patterns. Self-organizing, emergent, expansive.	Cognition is embodied enaction—a history of structural coupling that brings forth a world.	Systems of the learner (neural, immune, visual, etc.) are embedded in networks of the context. All of learner's perceptions are experiential and enacted.

(continued)

<i>Learning Goals and Perspective</i>	<i>Nature of Power in Learning Process</i>	<i>Outcomes</i>	<i>Experience and Knowing</i>	<i>Educator's Role</i>
Reflective (constructivist)	Through reflection on experience, learner constructs personal understanding of relevant structures of meaning derived from action in the world.	More inclusive, integrative, discriminating mental constructs that can be applied to enable individual's success in new situations.	May repress individual's own personal constructions and alienate learner from value of own experiences.	Educators encourage reflective process and pose challenges to individual assumptions. They also validate knowledge acquired through personal construction.
Interference (psychoanalytic)	Unlearning old strategies of survival. Working through dilemmas to explore one's desires, attachments, self, and resistances to knowing.	Coming to tolerate the demands of the self and the social. Coming to accept and understand (recovered) selves.	Interference must occur within the learner. Pedagogy viewed as repressive and intolerant of complex processes of psychic "workings-through." Conflicts at the point in which learners meet the force of their cultural history stimulate interference.	Educator must accept own psychic dilemmas of love and hate. Honor the difficulty, time, and limits of learning as working through psychic conflicts. Clear spaces for people to learn. Attend with compassion. Avoid rescue fantasies.
Participation (situative)	Becoming more attuned to constraints and affordances of particular situations. Learner progresses along trajectories of participation and growth of identity.	Improved participation in interactive systems, the social practices valued most by the learner and community. Participation becomes more meaningful personally and socially.	Learner moves from peripheral participation in a community to more central positionality with competence. Pedagogy that separates learning from doing is artificial and repressive.	Educators may arrange sequences of activities and conditions in complex social situations that help learners best practice the kinds of participation they desire. Educators can make explicit the
Resistance (critical cultural)	Naming repressive cultural practices and discourses. Recovering lost subject positions and voice.	Social reconstruction: make explicit the politics and constraints of cultural practices, communicate and understand differences in human experiences, and build coalitions among differences.	The way power flows in a particular relationship and culture determines knowledge. Power determines what is considered knowable and worth knowing, who is a recognizable knower, and what experience means.	ideologies, practices, and positioning that construct experience in particular ways. Open spaces for and support resistance. Help seek beyond current struggles to craft social alternatives.
Co-emergence (enactivist)	One's behavior changes as one learns to cope with new situations and conditions. As one's actions change, so does one's world and one's sense of the world.	In educational applications, enactivism seeks to help describe and analyze learning in systems.	Power is understood in terms of system dynamics as energy. Continuous, generative.	Assist participants to continually name and rename changing nuances outside and inside them and to unlock the grasp of old categories that do not fit new situations. Educators must be clear about their own entanglement in the emerging systems of thought and action.

NOTES

1. Enactivism has evolved from ecological and cybernetics theories appearing in writings by Bateson (1979), Lovelock (1979), Maturana and Varela (1987), Varela (1989), and others. Educational writers such as Sumara, Davis, and Carson (1997), Kieran, and Simmt have just taken up enactivist explanations of cognition in the 1990s.

2. For examples of this very phenomena, see Mezirow (1996), who subsumes other theories of cognition under a preferred perspective, "transformative learning," and debates on cognition published in the *Educational Researcher* (Anderson, Reder, & Simon, 1997; Greeno, 1997; Prawat, 1997) in which different writers assess each other's perspectives according to the postulates of their own premises.

3. Philips (1995) identifies six distinct views of constructivism ranging according to the emphasis accorded either to individual psychology or public disciplines in constructing knowledge, the extent to which knowledge is viewed as made rather than discovered, and the emphasis put on the individual knower as active agent rather than spectator in the construction of knowledge.

4. According to object relations theory, once the ego perceives an object as distinct from itself, it decides whether to desire the object as good or reject it as bad. As Gilbert (1998) explains, "perception is thus an ego function that responds both to the demands of unconscious desire and to the external demands of reality" (p. 31). The next decision is whether to ingest the good object. Knowledge perceived as good is still threatening because once it is taken in to the ego, it has the potential to transform the ego—an event against which the ego tries to protect itself. The ego also risks destroying the good object of knowledge through the act of incorporating it and losing the boundaries that separate itself from the knowledge.

5. Freud (1938) argued that intolerable ideas are permitted into the consciousness only as our denial that the idea is true. In this denial, we attempt to intellectualize the idea, to separate our ego's emotional involvement with (and therefore possible subjection to) the idea, even while we are actively hating the idea. In these tensions between intellection and affection, learning occurs as a movement through the dilemma to accepting the knowledge. The dynamic of pedagogy within this movement is problematic. Should education induce these tensions and somehow midwife the movement to learner's acknowledgment and insight? How much anxiety can an individual stand? How can learning proceed if its very conditions of anxiety inhibit stimulate the resistance that forestalls learning?

6. Britzman (1998) calls these survival strategies the "arts of getting by" and claims that they are prevalent in education. Curriculum mostly resists these complex subtle encounters, constantly playing beneath classroom talk and the press of covering content, and both students and teachers have learned to ignore them.

7. Questions concerning psychoanalytic theorists include the following: How does the unconscious interfere with conscious thought to produce knowledge? And what knowledge do we resist? Other issues that concern learning, from the psychoanalytic perspective, are the location and direction of desire, including the desire for specific knowledge and its (often) misfit with the thing to be learned and the discontinuities and uncanny conflicts in experience.

8. Pile and Thrift (1995) are part of a current in cultural geography that is using metaphors of space, movement, maps, and time to analyze subjectivity and learning. Actor-network theory is one frame that has generated recent pedagogical interest. As described by writers such as Law (1994) and Latour (1993), actor-network theory illuminates regional flows of action in terms of knowledge production. Knowledge is assumed to be constituted in social networks spread across space and time, and individuals develop as they move through these networks. Individuals experience the network's knowledge as they participate in its spatial and temporal arrangements. The space-time arrangements of a particular activity have physical and symbolic dimensions, representing to individuals what they are supposed to do in a space and how they should use their time (including notions of who or what is not supposed to be there).

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