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### Taking things into account: learning as kinaesthetically-mediated collaboration

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Running head: KINAESTHETICALLY MEDIATED COLLABORATION

Taking *Things* into Account: Learning as Kinaesthetically Mediated Collaboration

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### Biographical Statement

Jayson Seaman, Ph.D., is an Assistant Professor of Kinesiology at the University of New Hampshire, in the Outdoor Education program. His research focuses on sociocultural processes of experiential learning and development in formal and informal educational settings.

## Abstract

This article presents research conducted in 2004-2005 at Project Adventure, Inc., on participant learning processes in challenge course workshops using the framework known as Cultural-Historical Activity Theory (CHAT). CHAT views learning as a shared, social process rather than as an individual event. Participants' experiencing and learning are described as *mediated* by the physical and social conditions of the experience and by the contributions of other participants. The concept of *mediation* suggests that the meaning participants make of experience is not an individual event, but instead is enacted as a creative, collaborative process using cultural and institutional tools. The recognition that people's physical, social and reflective learning processes are mediated challenges longstanding assumptions about the radical autonomy of learners, about "direct experience," and about the centrality of independent, cognitive reflection in experiential learning. Empirical data showing processes of *mediation* are presented, and the implications for research and theory are discussed.

Keywords: Experiential learning, activity theory, adventure education, experiential education

## **Taking *Things* into Account:**

### **Learning as Kinaesthetically Mediated Collaboration**

Studying learning in adventure education has always been a challenging task. Scholars and practitioners alike have long believed that the kinaesthetic and social aspects of adventure programs play key roles in participants' learning processes, yet their relationship has proven immensely difficult to capture using longstanding concepts and routine methodological approaches. Although recent studies have drawn connections between program components and individuals' self-reported benefits (Goldenberg, McAvoy, & Klenosky, 2005; McKenzie, 2003), important questions remain regarding the ways shared meanings are established in adventure experiences, how meanings relate to different contexts for interaction, and how these processes constitute experiencing and learning. The continued inability to draw more robust connections between the physical conditions of the adventure experience, participants' social interactions, and learning outcomes remains problematic for the advancement of research and practice.

In this article, the concept of *mediation* (Vygotsky, 1978) is presented as one of the possible missing links connecting the material conditions of adventure, social processes, and individual learning. The article is based on a qualitative study conducted in 2004 and 2005 at Project Adventure, Inc., a worldwide provider of challenge course programs and training. The purpose of this study was to address the need for (a) qualitative research that might "inductively discover any 'new' program characteristics that may be influencing outcomes" (McKenzie, 2000, p. 26); and (b) further theoretical work on the ways experiencing and learning processes are situated in specific social and institutional contexts (Quay, 2003). The research was guided by the methodological framework known as Cultural-Historical Activity Theory, or CHAT (Engeström, 1987; Leontiev, 1977), which is related to the "situated" and "cultural discourse"

theories noted as being potentially applicable to adventure education (Quay, 2003). CHAT is germane in that it offers principles for studying people working together to accomplish ill-defined tasks in natural settings. Its principles also focus the researcher's attention on the material conditions of experience, a point of view consistent with the beliefs of adventure educators who place a premium on social interaction in novel physical conditions (Walsh & Golins, 1976). By grounding the concept of mediation in data-driven cases, I mean to bring alternative ways of thinking about and studying learning in adventure education closer to the fore as theoretical frameworks for research and program design.

### **Introduction: What Links are Missing?**

According to the literature, adventure education enhances personal and social development in various domains (McKenzie, 2000). Challenge courses—specially designed apparatuses made with cables, ropes and beams—are thought to “mimic” the conditions of extended adventure programs (Priest & Gass, 1997). The extent to which they approximate longer adventures notwithstanding, research on challenge courses generally supports claims about their benefits (e.g., Gass & Priest, 2006; Goldenberg, Klenosky, O'Leary, & Templin, 2000; Haras & Bunting, 2005). The fundamental assumptions behind existing belief systems and research approaches are not uncontroversial, however. The presumed role of the “facilitator” as a neutral figure has been confronted as idealized and understudied (Brown, 2004), with authors tending to focus prescriptively on instructional techniques rather than placing instructional acts in a broader theoretical framework (Baldwin, Persing, & Magnuson, 2004). Empirical claims to the benefits of challenge course participation have also been disputed on the grounds that the research questions themselves often contain unexamined presuppositions (Wolfe & Samdahl, 2005). Lastly, although authors have pointed out how the material and symbolic conditions of

classroom environments—books, pencils, written and spoken language, students’ physical arrangements—heavily influence learning in schools (e.g., Lindsay & Ewert, 1999), the idea that learning follows any kind of similar structuring principles in “experiential” environments has received little recognition.

Perhaps the greatest taken-for-granted feature in much of the research on challenge courses, and in adventure education more generally, is the “dominant” constructivist perspective of experiential learning (Fenwick, 2001). Constructivist perspectives (e.g., Kolb, 1984) typically define experiential learning as “the change in an individual that results from reflection on a direct experience and results in new abstractions and applications” (Itin, 1999, p. 93). It is generally regarded within this framework that, in *direct experience*, the autonomous “learner is directly in touch with the realities being studied” (Keeton, in Kolb, p. 5), and that educators should try to be “removed from their roles as interpreters of reality, purveyors of truth, mediators between students and the world” (Chapman, 1995, p. 239). “Reflection” is presumed to be the neutral process by which the individual learner constructs “logically and emotionally sound theories” (Wyatt, 1997, p. 80). What these abstractions and theories are or how they relate to “direct experience” remains unclear.

Despite the ubiquity of the constructivist perspective in the literature and its unmistakable influence on the field’s guiding principles (see AEE, n.d.; Russell, 2006), numerous critiques have been leveled against it. Critics argue that constructivist models offer a narrowly psychological, “mechanistic” conception of learning (Quay, 2003), ignore the ways perceptions and actions are culturally determined (Miettinen, 2000), and fail to account for the complex ways “people in interaction become environments for each other” (McDermott, in Erickson & Schultz, 1977, p. 6). The constructivist perspective of experiential learning thus renders *experience* a

static abstraction existing in “splendid isolation” (Jarvis, in Fenwick, 2001, p. 20). The final criticism of constructivist assumptions—and the one I wish to address most directly in this article—is that “the activity and context in which learning takes place are thus regarded as merely ancillary to learning—pedagogically useful, of course, but fundamentally distinct and even neutral with respect to what is learned” (Brown, Collins, & Duguid, 1989, p. 32).

Educationally speaking, Brown, Collins and Duguid’s critique especially raises at least two practical concerns. First, maintaining constructivist assumptions may perpetuate the illusion that organizing people’s experiences and calling them simply “direct” is somehow not consequentially related to people’s learning, allowing experiential educators to avoid facing important normative questions about their conduct and the aims of their practice (cf. Brookes, 2002). Secondly, there is the related question of how “direct” experiences and even “reflection” might be tailored to support different educational or developmental aims. Although various techniques have been proposed for this purpose (e.g., Gass & Priest, 2006; Hovelynck, 1999), constructivist models offer limited explanations as to how different kinds of thinking take place among different people in different situations. It is very difficult, therefore, to justify instructional decisions on any grounds other than personal intuition or institutional tradition.

Many of the constructivist models defining experiential learning as a psychological, stepwise process thus offer limited insights into a complex practice rich with dynamic physical and social interactions (Quay, 2003). Together these criticisms suggest that individualistic, outcomes-oriented research approaches and existing beliefs about how learning happens in adventure programs form a set of mutually reinforcing assumptions, a closed loop that presently limits what researchers study and how practitioners justify their actions to themselves and to others. Therefore, the adoption of (a) new theoretical concepts or (b) different methodological



approaches seems to be warranted. Although similar suggestions have been made before, little empirical work has been done using any “new” theoretical frameworks.

### **Research Framework**

#### ***Locus***

Founded in 1971, Project Adventure, Inc. pioneered challenge courses as a central part of facilities-based adventure programs (Prouty, 1991). A major part of Project Adventure’s business is the open-enrollment “catalog workshop” in which adult practitioners learn how to use various games, problem-solving exercises, and safety guidelines. These workshops have two purposes: to train participants in the use of foundational concepts and routine practices, and to employ adventure techniques as the means to participants’ personal growth in a group context (Project Adventure, 2002). Although the concept of mediation can be seen in both the professional development and personal growth dimensions, the data presented in this article pertains more to the latter.

#### ***Workshop and Research Participants***

In all, 30 adults participated in the three workshops I attended, with each person agreeing to participate in the study. The workshops included two “adventure programming” workshops and one “adventure-based counseling” workshop. The participants included men and women of various age, ethnic, national and racial backgrounds. Four were non-native English speakers. Their expertise in adventure education varied, from novices to experienced practitioners in different areas including business training, grade schools, counseling, social work, higher education, and outdoor center management. Trainers included Rachel, a full-time employee with extensive experience in outdoor education; Lydia, a former physical education teacher; and Barbara, who delivers workshops primarily in the area of adventure-based counseling.

Data collection methods included semi-structured interviews (Fontana & Frey, 2000) with each trainer and participant at multiple points before, during and after workshops; member checks (Schwandt, 2001) with key participants, trainers and Project Adventure employees; field notes (Emerson, Fretz, & Shaw, 1995) taken while I was a “moderate participant” (Spradley, 1980) at workshops and in Project Adventure staff meetings; recordings of naturally occurring talk (Silverman, 1993) during exercises and reflection sessions in workshops; and material culture analysis of (a) archival, internal and public documents, and (b) the “props,” “elements,” and other physical instruments used during workshops.

### ***Cultural-Historical Activity Theory as Methodology***

Kraft (1990) first suggested that learning in adventure education might be considered “socially shared mental work” (p. 181), however this concept has largely gone unexamined with learning continually treated as an individualized, mental phenomenon (Lave, 1993). While this approach may be useful for isolating discrete variables and gathering descriptive data on individuals’ perceptions, it is not suited for achieving a process-oriented view of learning. As Lave explains, “It is not ... sufficient to pursue a principled account of situated activity armed only with a theory of cognition and good intentions” (p. 7). The tendency to isolate variables rather than study interactions may also contribute to the pervasive “black box” problem, where program outcomes can not be meaningfully aligned with their sources (Ewert, 1993).

In contrast to outcomes-oriented research that makes the individual’s perceptions the central unit of study, CHAT posits that “relations among people genetically underlie all higher functions” (Vygotsky, 1981, p. 163). In other words, social relations are thought to precede individual thinking and development. The key approach in CHAT research intended to help achieve a more holistic, relational view of learning is to use a *unit of analysis* encompassing the

interaction between subjects and the environment (Leontiev, 1977). *Unit* refers to “a product of analysis which, unlike elements, retains all the basic properties of the whole and which cannot be further divided without losing them” (Vygotsky, 1962, p. 4). In CHAT research, “the basic unit of analysis is no longer the (properties of) the individual, but the (processes of) the sociocultural activity, involving active participation of people in socially constituted practices” (Rogoff, 1990, p. 14: parentheses in original). Using a unit of analysis explicitly suited to identifying social processes makes it possible to recognize the ways people engage with one another to realize goals, initiating moment-to-moment changes in the environment and reciprocally affecting one another’s participation. Learning in this framework is inherently a dynamic, joint process in which creativity, collaboration and reproduction all become central considerations.

Although different units of analysis are often adopted (e.g., Lave & Wenger, 1991; Rogoff, 1995; Wertsch, 1994), one commonly accepted unit of analysis is the *activity system* (Engeström, 1987). The prototype of an activity system, used as the unit of analysis in this study, can be seen in Figure 1.

#### INSERT FIGURE 1 HERE

Any activity is believed to contain, at minimum, the six categories depicted above. In the activity system, these categories are defined as follows: *artifacts* include material instruments, conceptual models, and visual and textual symbols; *object* refers to the overall purpose of the activity; *division of labor* refers to the separation of tasks and roles within the activity; *community* describes the specific institutional setting in which the activity takes place; *rules* include overt norms of conduct, standards of practice, and tacit social values; and *subject* refers to the individuals involved in the activity (Engestrom, n.d.).

### *Coding and Analytic Procedures*

To complement CHAT, grounded theory procedures were used to analyze data. This combined approach helped keep participants' points of view in mind while safeguarding against a "reliance on respondents' overt concerns" which would "lead to narrow research problems, limited data, and trivial analyses" (Charmaz, 2000, p. 514). Such data-level descriptions tend not to "go beyond commonsense tales and subsequent obvious, low-level categories that add nothing new" (Charmaz, 2002, p. 681). Specific procedures included the traditional use of open coding, thematic category building, axial coding, and theoretical sampling to refine the conceptual categories (Strauss & Corbin, 1998).

In the following discussion, mediation is presented as a key part of a cultural-historical approach to experiential learning; a potential missing link that can be useful to further research. To ground my argument in practice, data from two cases are employed to illustrate the ways nonhuman "things" mediate participants' interactions and learning processes: the Full Value Contract (Schoel, Prouty, & Radcliffe, 1989), and specially designed "elements." I focus on the co-evolving relationship between *artifacts*—specific mediators—and *subjects*—participants and trainers—and the ways their interactions and learning processes were situated in the specific *community* of Project Adventure, Inc. It is necessary to point out that the data were selected "for their exemplary and prototypical nature" (Raeithel, 1996, p. 320) in describing mediation, rather than for their independent ability to fully represent every possible dimension and occurrence of mediation.

### **Discussion: The Concept of Mediation**

Mediation refers to the ways "cultural tools" coordinate between social interaction and individual mental functions (Wertsch, DelRio, & Alvarez, 1995). Mediators include symbol

systems such as “language, various systems for counting, mnemonic techniques; algebraic symbol systems; works of art; writing; schemes; diagrams, maps and technical drawings; all sorts of conventional signs and so on” (Vygotsky, 1981, p. 137). Mediators also include physical instruments and conceptual models (Wartofsky, 1979). All of these types of mediators played significant roles in the workshops I studied.

Before the two main cases are discussed, an example helps illustrate how different mediators are multiply embedded in experiencing and learning processes. “Comfort zone” is a term often used in challenge course work, providing a rough guide to help people manage the unsettling emotions that can result from taking risks in front of others and to interpret these feelings as noteworthy to one’s development (Holyfield, 1995). It is however a vague concept until it becomes associated with gestures, interpersonal relationships, and specific emotions. In each workshop, trainers introduced the concept of “comfort zones” by laying several ropes on the ground in concentric circles:

During the challenge circles activity ... Lydia said “What you are seeing before you is an emotional map. It is called challenge circles. The second PA philosophy is called challenge by choice. I want to point out a few places on the map. The first is the comfort zone ... You’re real comfortable here ... The second circle is called the stretch zone ... the last circle is called the panic zone. Each zone has degrees in it.” She also said that “comfort zones can expand, and panic zones can retreat.”

(fieldnotes, 9.23.04)

Participants then stood at various places on the “map,” depending on their response to a series of questions initiated by the trainer. By interacting with the map and with each other, participants learned that “comfort zone” could be used to interpret personal feelings, support one

another's involvement, and engage with the "cornerstone philosophy" of *challenge by choice* (Project Adventure, 2002). Further negotiation of its meaning also occurred during more didactic sessions, as in the following excerpt when the trainer (Rachel) asked participants to offer words that would be used to build the contract: <sup>1</sup>

Shawn: [challenging, too

Rachel: [and what do you mean, say, say more. Do you want the group to be challenging?

How would, how

Shawn: [it's always good to, to challenge each other to be able to ... be able to work in the second circle and not just the inner circle. And challenge

Rachel: [OK. And step out of your comfort zone? (recording, 2.19.04)

Here, Rachel completes Shawn's partially-formed sentiment, linking a gesture—"stepping out"—with Shawn's contribution of "challenging each other." It is also evident that Shawn's previous interaction with the rope circles organizes his thinking. Through this reciprocal and embodied process, "comfort zone" converts a complex range of feelings, thoughts, and preferred forms of conduct into a shared, communicable concept. Importantly, although "comfort zone" is by now a well-worn adventure phrase and curricular topic, its specific meaning depends on the way it is locally and jointly produced and its use value lies in its ongoing ability to help participants interpret and communicate feelings that might be "paralyzing at worst, and just an unpleasant experience at best" (Holyfield, 1995, p. 137):

On the pamper pole: Beth climbed the tree and went to jump off, but rather than jumping fell off the front of the platform. "Wahhh" she said, grasping at the rope from which she was suspended. "I freaked out-sorry." Rachel: "greeter please." Ted and Brian trot over to Beth. ... Beth: "that was hard. I guess I'm not as good at high

elements as I thought. I was in my little happy circle of learning then when I jumped I was not.” Shawn: “the ‘oh shit’ circle.” (fieldnotes, 2.22.04)

Here Shawn and Beth modify the mediating concept of “comfort zones” for their own purposes, playing with its meaning in an innovative way. By linking up gestures, utterances and feelings, “comfort zones” helped consummate participants’ experience in a symbolic social, psychological and physiological moment of learning. Although mediators are provisional and negotiable (as evidenced by Shawn’s “oh shit circle” comment) they are not easily ignored. For to do so would be not just to resist an institutional concept—it would mean rejecting a version of reality (cf. Fine, 1991).

### ***The Full Value Contract: A Tool for Shared Thinking***

In an everyday sense, mediators are “the ‘carriers’ of sociocultural patterns and knowledge” (Wertsch, 1994, p. 205). In educational settings, words, pictures, and physical instruments are arranged in specific ways to support individual, institutional and societal goals, and are intended to be encountered more systematically than in everyday life (Newman, Griffin, & Cole, 1989). The idea of “sequencing” (Schoel et al., 1989) a challenge course program speaks to the way mediators can be organized to support learning. One of the central mediating instruments in Project Adventure workshops is the Full Value Contract, or FVC, (Schoel et al., 1989), described thusly:

The essential “law” of Adventure counseling takes the form of a social contract, both personal and interpersonal. It is a law built on value for each person and for the group as a whole. It is a first line of defense when it comes to the group’s having a safe place to be. (p. 94)

The use of contractual language is significant in that it assumes the basic separation of

one person from another, while simultaneously implying that this division can be overcome through some kind of explicit mutual agreement. This characteristic provides insight into how the FVC mediated interaction as a carrier of “norms,” as a growing record of accomplishments, and as a tool for the ongoing expansion of values and ideas. In the workshops I attended, its lifecycle began through a process of negotiation heavily guided by trainers, who attempted to establish its role as a useful, central artifact. In the scene below, Rachel stands in front of a flipchart, with participants in a circle around her as they jointly construct the contract:

Rachel: And so ... coming up with a full value contract, is really about creating behavioral norms, that people will commit to. And it's group centered, not me giving you those words, but letting you create and put time into creating an environment that's right for you...so what I want to do is, simply I'm going to be your scribe, and work on creating a list...

...

Beth: I think questioning, not being afraid to ask a question.

Rachel: OK

Beth: because if one person has a question... 3 other people have the same question type deal, you know.

Rachel: [which relates in some ways to the honesty piece, and certainly too, to be able to be honest or questioning, the environment needs to be safe. So certainly some of these link and are connected to each other, and are almost dependent on each other

Katie: creative?

Rachel: K

Katie: coming up with different solutions



Rachel: [OK. Being willing to try new things, being willing to come up with new ideas

...

Rachel: OK ... we'll use this as a tool, as a way to check-in after we do something today: 'Well how did we do with the things we're working toward? Is there anything that was missing that we need to be more aware of?' We'll use this as a tool for checking in and will take this with us, wherever we go. And remember, this always can be added to if we need to... (recording, 2.19.04)

In this excerpt Rachel is clearly more than just a scribe, often reconstructing participants' phrases to fit more closely with the intended relational theme of the contract. The values included in the provisional version drafted in the above excerpt, which were strongly angled toward the relational ideals of adventure programming, were ratified initially through the guided process of "scribing" and then continually when the document was included in discussions before, during and after exercises. It is notable that trainers called the FVC a "tool," since this aptly conveys its mediating function with respect to the ways mental operations are carried out on the "social plane" (Vygotsky, 1978); it served a useful role in helping people collectively "remember" and "reflect" (Lizzie interview 10.7.04).

The boundaries of the FVC continued to be managed by trainers who often intentionally "steered" (Lydia interview, 9.23.04) the process. The intent, however, is not to suppress meaning (cf. Holyfield, 1999)—although this sometimes happens—but to furnish the group with a useful tool for the ongoing interpretation and construction of experience, of which the FVC is itself a constitutive part. One way the contract began to take on increasing use value in the group's self-construction is when they started recording significant events on it in the form of drawings,

words, notations, and other symbols. Their representation on a public artifact formed a kind of shared semiosis, as seen in Figure 2:

INSERT FIGURE 2 HERE

The symbols drawn on the FVC pictured above were both emergent from and embedded in the group's developing collective identity. Importantly, these symbols (usually drawn at the trainers' urging) encoded prior events when minor or major conflicts were successfully resolved; the symbols codifying a history of both unity and division. Here the significance of the "contractual" language bears revisiting, since these symbols capture the deep and abiding sense of conflict that is possibly generative of new meaning in group situations (Engeström, 1987). As an artifact, the FVC also connects participants via a symbolic vocabulary communicable only among those who navigated challenges together, while correspondingly segregating members from non-members who would undoubtedly find the symbols confusing if not wholly indecipherable. The symbols drawn on the contract provide a distributed way of speaking and acting that is embedded within and gives further structure to social and personal experience, as Subhash described following his participation in a workshop:

Subhash: But it was amazing level playing field, everybody played fairly, and I think the group really assimilated the concept of full value ... Genuinely assimilated, and people have made, have gone to great lengths to really imbibe the philosophy of the contract.  
(interview, 9.25.04)

Subhash expresses the way his learning processes were mutually interdependent with the ongoing social construction of the full value contract, and the ways mediators function more generally to coordinate social and psychological operations. His notion of "imbibing" speaks to the way the meaning carried within the contract was appropriated as an "integrated system ... of

content-filled social connections” (Leontiev, 1981, p. 247). His comments also underscore the psychological function of the tool, as people “genuinely assimilated” it as a way to regulate their own and one another’s participation and to construct personal knowledge. By this analysis, social values such as perspective taking, cooperation and communication—typically regarded as outcomes in adventure programs (McKenzie, 2000)—may be reconsidered as constituents of learning rather than separate outcomes *from* learning.

Importantly, although the ongoing construction of the FVC was dynamic and highly improvisational, a broader look reveals its ties to the institutional tradition of full value contracts, especially the specific pattern of drawing hands in a circle around the outside of a piece of paper—a somewhat routine way of designing them. It is therefore only partly true that a particular FVC “belongs” to a given group; as an ideational tool, it connects participants’ local experience with a set of tried-and-true instructional practices, to Project Adventure’s workshop curriculum as an overarching and increasingly standardized artifact requiring the contract’s inclusion as “core content” (fieldnotes, 4.11.05) and to the other groups who have over time taught the trainer how to use paper and magic markers to skillfully manage people’s sense of shared purpose, interdependence, and collaboration.

***Baking in Teamwork: “Elements” as Kinaesthetic Mediators***

Remarkably, challenge course elements continue to be designed and adapted to support different themes (Rohnke, Tait, & Wall, 2003), however they are rarely given credit for doing a great deal of the work in learning. In this section, one thing will be emphasized: the design of the elements themselves profoundly affects “the symbolic construction of possibilities” (Raeithel, 1996, p. 321). Said another way, the mountains don’t just speak for themselves; they can be made to speak for the curriculum (cf. Baile, in James, 1980).

Writing of artifacts used in work situations, Hutchins' (2001) words ring equally true regarding challenge course elements: "The mediating artifact has been designed with particular structural features that can be exploited by some procedure to produce a useful coordination" (p. 340). Rachel's following description of her use of an element—in this case a series of cables stretched between trees, about 24 inches off the ground—aptly indicates Hutchins' explanation of how mediating artifacts are used:

Jayson: You used a phrase that I had never heard before so I was kind of drawn to it. You said, 'we try to bake in teamwork' ... I'm wondering if you could explain a little bit about the use of that metaphor.

Rachel: ... I have certainly have facilitated the Mohawk walk where I don't use that [rule—J.S.], of you have to remain in contact with another person, and when I don't do that, people do individual attempts across the wire, and even if they're doing that in a safe way it doesn't foster the same type of teamwork ... in terms of problem solving it requires people to use the physical support of each other to be successful, and so that's what I really meant by it, to bake in the teamwork that physical support requires people to, to physically support each other, and potentially ask for help and receive help.

(interview, 2.19.04)

"Baking in teamwork"—i.e., exploiting the structural features of an element by using rules, goals and language frames to guide the way it is used—does not involve explicitly telling people what to think, but it orchestrates the physical and social conditions of "experience" within which certain action sequences and utterances are likely to occur, and upon which participants will subsequently "reflect." That these outcomes are regularly achieved speaks to the power of mediators to function dependably across time. Employing a mediator in this way renders direct

instruction of relational themes and curricular content unnecessary, but it is a value-laden instructional act nonetheless. Importantly, participants in the workshops I attended did not normally resist these “baked-in” lessons. Participants’ willing engagement with these mediating structures is captured in Alex’s enthusiastic statement:

Alex: ... right from the very beginning when we got up out of our chairs. I think that set a tone that it was going to be an active, truly experiential experience... Those were effective activities that let us know that ‘here’s the way the information is going to be presented. You’re gonna touch it, feel it. You’re not just gonna listen to it.’ (interview, 2.19.04)

Alex’s vivid explanation of *touching and feeling the information* conveys the sense in which kinaesthetic poses, spatial relations, physical instruments and linguistic mediators are deliberately orchestrated to guide participants’ mutual involvement. Trainers understand this in their “gut” (Barbara interview, 10.10.04) and have become quite adept at designing rules and frames tailored to exploit the physical properties of specific elements with the idea that the resulting interactional arrangements and utterances will be “worked into faculty” (Dewey, 1990/1956, p. 208). When these strategies were successful, “learning” involved the incorporation of the attendant relational and curricular themes into higher-order notions of self and other, into an “advanced form of intersubjectivity” (Engeström, 1987, p. 258). When such physical mediation “works,” participants “discover” these embedded features as an inherent part of the situation created by their own collective labor, making the trainer and the institution largely invisible. Viewed this way, to consider experience as straightforwardly “direct” and “learning” an individual process of meaning making taking place during “reflection” seems reductive and idealized.

I would like to provide one particularly salient example of the complex knot of meanings

that can result from the process of mediation. In the following example, four people climbed a 25' high pole and balanced together on a very small platform. In order to successfully climb atop the platform, participants grabbed each other's legs, knelt in front of one another, buried their faces in each other's bellies, and ultimately stood with their arms around each other and their faces only inches apart. Figure 3 depicts two men on this element:

INSERT FIGURE 3 HERE

While participants expected physical challenge from these elements, they did not necessarily anticipate the feelings that might result from the compromising—even sexualized—kinaesthetic positions and spatial relations entailed in participation, which they then needed to “process.” This was particularly heightened when the men depicted above were put into these positions:

During the first group, Jack and Andrew went first. Andrew climbed up and then helped Jack get on the top. The two men stood on the 16” platform, holding on to each other just to stand still and not fall off. Andrew joked about hugging Jack: “Jayson you didn’t take a picture did you? Don’t take no picture of him holding on to me.” Jack: “This is retarded.” Andrew: “Just relax,” as he patted Jack’s back. Angela came up next, saying as she climbed up on the platform: “I hate this! I’m gonna pee myself.” People on the ground cheered her on: “You got it! We have you!” Angela made it up on the top and everyone on the platform chanted “the roof, the roof, the roof is on fire,” gently swaying their hips in rhythm with their singing ... After being lowered to the ground, I handed Andrew his camera: “I tried to get a picture of you mid-flight.” Andrew responded: “You didn’t get a picture of Jack hugging me, did you?” I replied: “I got two.” (fieldnotes, 10.10.04)

This example illustrates that the overt problem—how can I climb this pole?—may not be as significant as the subtext mediated by the physical characteristics of the element—what does it mean that I had to climb up another man’s body to do it? While it may be overblown to suggest that the entire element is built with such a subtext in mind, it is only just so: dealing with the contradictions established by the provocative meanings of the resultant bodily poses, person to person contact, spontaneous eruptions of vulgar speech, and constricted physical space seem to constitute much of people’s experiencing and learning on challenge courses. This example illustrates how the complex double meanings—in this case, the simultaneous and contradictory construction of male heterosexuality and physical interdependence—often enacted on elements ruptures the thin boundary between the play world of adventure and the broader cultural domain. It should be noted here that the meaning potential embedded in such elements may easily trigger an exclusionary or marginalizing situation because of the cultural subtexts possibly activated by certain poses, forms of touching, utterances, and spatial relations. These deeper contradictions, even if they are pushed aside in favor of an instrumental discussion about task completion, are often the real “problems” that must be “solved” during challenge course exercises. These findings recall Bell’s (1993) provocative question: What constitutes experience? This question might usefully be recast in this argument as an empirical one: How is experience mediated, what are the cultural values explicitly or tacitly emphasized by various mediational forms, and how do they constitute people’s learning?

### **Conclusion**

It has been suggested that facilitators have “no agenda and no goal beyond developing shared meaning” (Wyatt, 1997, p. 84). In one sense this is true, for they are never required to declare their agenda: it is simply embedded in the material and discursive conditions of “here-

and-now concrete experience” (Kolb, 1984, p. 21), to be realized by participants’ own labor in the various events designed for them. On the other hand, it is clear that the trainers’ agenda and the meaning ultimately shared in the workshops I attended underwent transformation as events proceeded based on the contributions of multiple members, yet it remained coordinated within the “organizational ideology” (Holyfield & Fine, 1997) of Project Adventure’s curriculum, mediated by the various physical, linguistic, and conceptual artifacts organized for our benefit.

“Direct experience” and “reflection” thus provide an extremely limited way to understand the physical, social and individual process of learning in adventure education. Admittedly however, the conceptual categories of experience and reflection do help researchers and practitioners understand events at a general level—in fact, the employment of action-reflection sequences in practice seem to be important as developmental cycles for framing, enacting, deconstructing, and reconstructing events into higher-order notions as part of a coherent, shared narrative. Action-reflection sequences will probably always provide a useful, rough-and-ready way to plan programs, but researchers might do well to resist “direct experience” and “reflection” as basic descriptions of experiential learning. For even “reflection”—especially when conducted as a social exercise—is a form of “socially shared mental work” (Kraft, 1990, p. 181) and is routinely mediated by stories, metaphors, pictures, social arrangements, relationships, goals, manipulable instruments, and bodies (see Engeström, 2003; Lampert-Shepel, 1999; Sugerman, Doherty, Garvey, & Gass, 2000). Future research might fruitfully study the effects of different mediators used with different participant groups: Which mediators support participant learning and development most effectively under what conditions?

The idea that all human action and thinking is mediated, as opposed to being simply “direct” or plainly “authentic” is perhaps the greatest challenge to constructivist experiential



learning assumptions (e.g., Moon, 2004, p. 78). This is a necessary challenge though: it has been pointed out that basing empirical inquiry and knowledge claims on unexamined constructivist models proceeds “without connection to the philosophical, anthropological, sociological and psychological studies of learning and thought” and “leads us away from the analysis of cultural and social conditions of learning that are essential to any serious enterprise of fostering change and learning in real life” (Miettinen, 2000, p. 71). I have argued that “alternative” theoretical frameworks such as CHAT can help illustrate how learning occurs as an indivisible part of continually changing physical and social conditions rather than as a phenomenon located “in the privacy of one’s own head” (Horwood, 1989, p. 6). I have presented mediation as a potential missing link to the ways physical and social interactions constitute learning in adventure programs. From these views, disregarding the material “things” used in practice as constitutive of experiencing and learning remains a serious analytic oversight in the study of physical activity and collaborative knowledge practices. If advocates of adventure education want to develop more effective and meaningful experiences for diverse participants in increasingly complex applications, the conceptual category of *mediation* will likely be a useful tool for future thinking.

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Footnotes

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<sup>1</sup> A left bracket— [ —indicates overlapping speech (Silverman, 1993) at the break in the previous line.

FIGURE 1

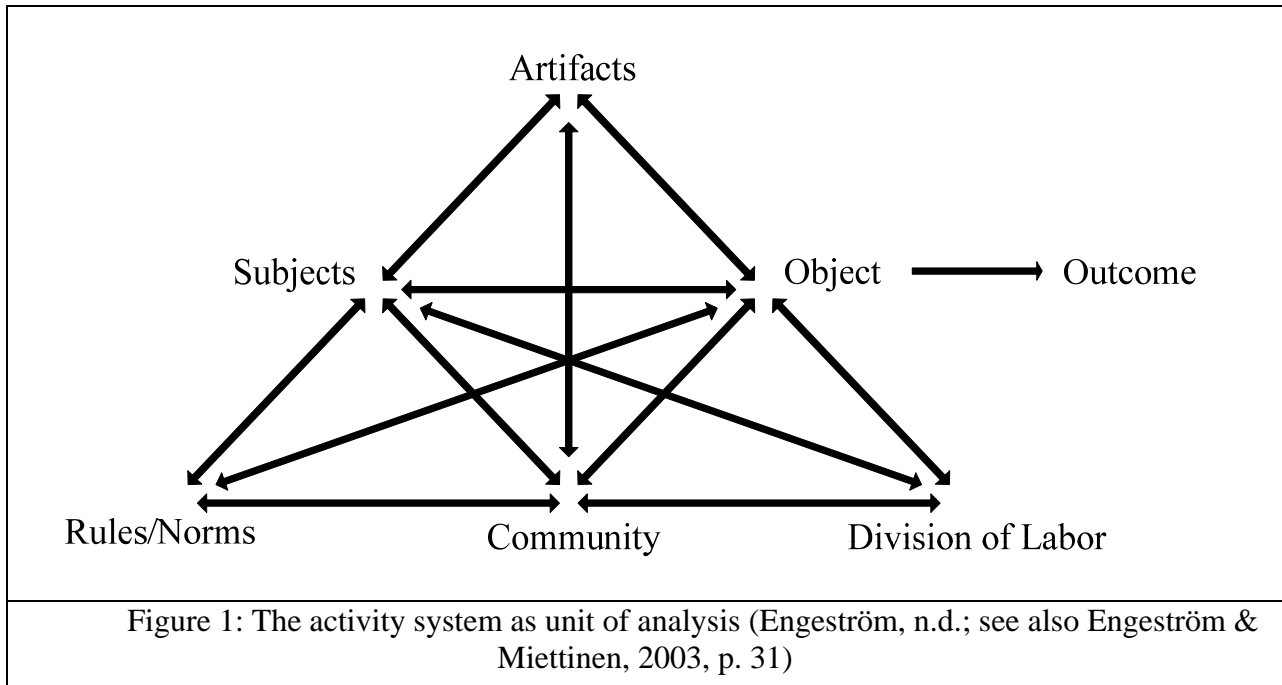


FIGURE 2

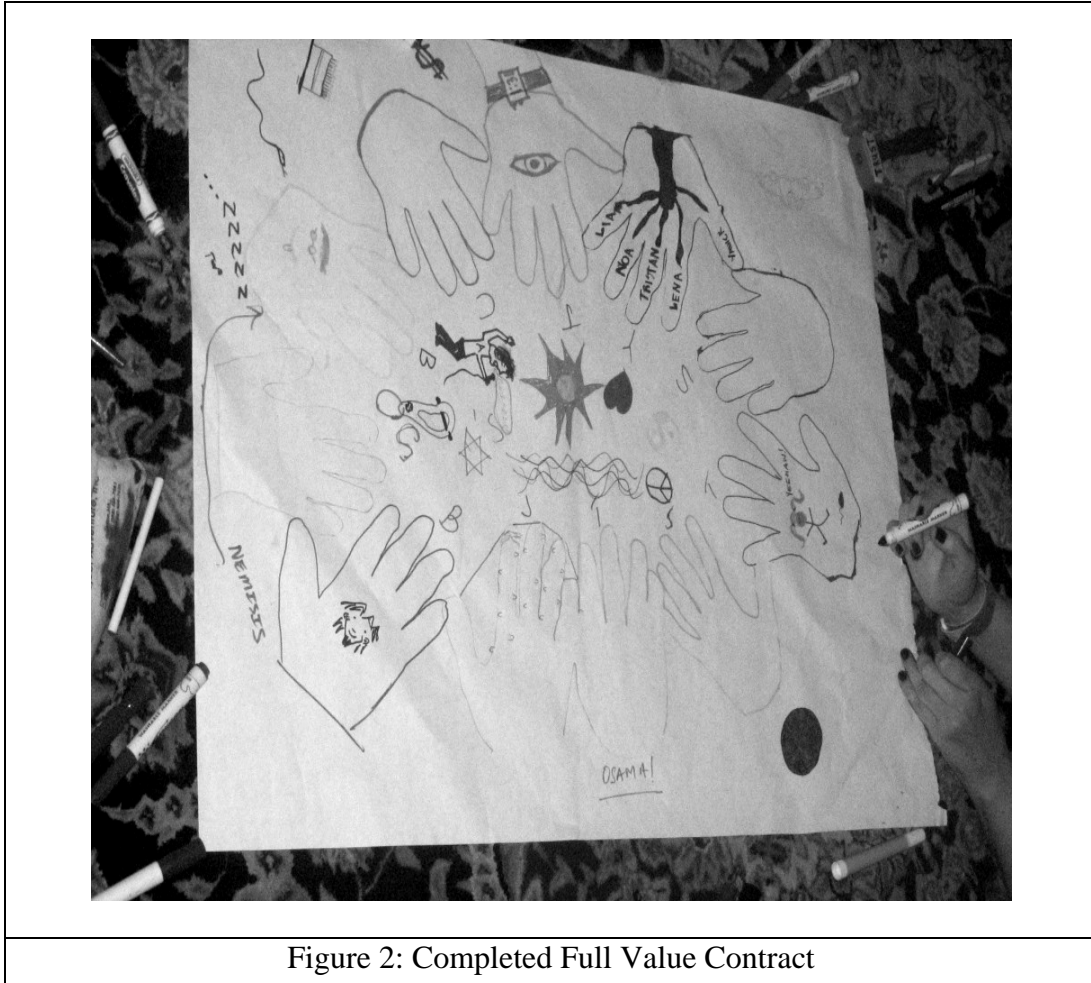


Figure 2: Completed Full Value Contract

FIGURE 3



Figure 3: Body position and spatial relations on pole climbing element