
ENTHEOGENS & EDUCATION: EXPLORING THE POTENTIAL OF PSYCHOACTIVES AS EDUCATIONAL TOOLS

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ABSTRACT

This paper looks at the possible applications of entheogens (i.e. psychoactive plants and chemicals used as spiritual sacraments) as potential educational tools to stimulate foundational types of understanding. The prescient observations of Aldous Huxley concerning what he saw as a malaise in contemporary education—no less relevant today in the 21st century than when he first made them fifty years ago—offer an impetus to reconsider the value of traditionally-used “plant teachers.” I outline the ideas of educational theorist Kieran Egan and philosopher Richard Shusterman, who portray mythic and somatic forms of understanding as foundational, yet largely neglected in modern pedagogy and philosophy, and show how entheogens might function within their theoretical frameworks to provide richer educational experiences.

At the start of a new millennium, more and more educational theorists and practitioners are arguing that contemporary education is in deep need of revision. It is something of a truism that education involves a holistic approach to human development (Peters, 1966). Yet development of the imaginative capacity to ponder one’s place in the cosmos, of sensibilities of wonder and awe, and of mind-body awareness seem to receive comparatively short shrift in the present educational environment, where test scores and instrumental thinking still tend to preoccupy administrators, teachers and students. This is particularly true in the latter years of compulsory education, when many students in their teens seem to have lost the insatiable curiosity they had as children and to have instead become jaded or bored. The youthful exuberance for discovery, learning, and imagining is all too often displaced by a desire merely to unreflectively consume entertainment and material goods. What this paper proposes is that “entheogens” might be appropriate educational tools to foster the capacities of wonder and awe and the mythic and somatic understandings that are neglected by traditional approaches to education.

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“Entheogen” is a word coined by scholars proposing to replace the term “psychedelic” (Ruck, Bigwood, Staples, Ott, & Wasson, 1979), which was perceived to be too socio-culturally loaded from its 1960s roots to appropriately denote the revered plants and substances used for traditional sacred rituals. What kinds of plants or chemicals fall into the category of entheogen is a matter of debate, as a large number of inebriants—from tobacco and marijuana to alcohol and opium—have been venerated as gifts from the gods (or God) in different cultures at different times (Fuller, 2000). For the purposes of this paper, however, I will focus on the class of drugs that Lewin (1924/1997) termed “phantastica,” a name deriving from the Greek word for the faculty of imagination (*Shorter Oxford English Dictionary*, 1973). Later these substances became known as hallucinogens or psychedelics, a class whose members include lysergic acid derivatives, psilocybin, mescaline and dimethyltryptamine; these all share physical, chemical, and, when ingested, phenomenological properties and, more importantly, have a history of ritual use as cultural tools to cure illness and/or to mediate cosmological insight (Grinspoon & Bakalar, 1998; Rudgley, 1994, Schultes & Hofmann, 1992;). I would also like to draw a terminological distinction between “entheogens,” those substances employed as (usually traditional) spiritual or sacramental tools, and “psychedelics,” one used for any number of purposes during or following the so-called psychedelic era of the 1960s (though allowing that some contemporary non-indigenous people have used psychedelics as entheogens).

The acceptance of entheogens as educational tools in postmodern Western culture will require a fundamental reconceptualization—a paradigm shift—of human understanding of the cosmos and the means by which it may be acquired. I am suggesting that contemporary educational theorists broaden their view of how one can attain wisdom and understanding beyond the constraints dominating education in industrialized nations in the past century. There have been critics and educational reformists who have advocated such a position before, including Rudolf Steiner, John Dewey, Paul Goodman and Ivan Illich, to name but a few. These thinkers have, to varying degrees, argued for changes that seemed inimical to the governing forces behind public education. However, few have gone so far as to embrace one of the most powerful and ancient technologies for altering or expanding consciousness, the use of psychoactive chemicals.

One writer who identified the educational possibilities of entheogens and the practical role that they might play in recovering capacities of wonder and awe was Aldous Huxley. Although better known as a novelist than as a philosopher of education, Huxley spent a considerable amount of time—particularly as he neared the end of his life—addressing the topic of education. Like much of his literature, Huxley’s observations and critiques of the socio-cultural forces at work in his time were cannily prescient—they bear as much, if not more, relevance in the 21st century as when they were first written. Most remarkably, and relevant to my thesis, Huxley saw entheogens as possible educational tools:

Under the current dispensation the vast majority of individuals lose, in the course of education, all the openness to inspiration, all the capacity to be aware of other things than those enumerated in the Sears-Roebuck catalogue which constitutes the conventionally “real” world Is it too much to hope that a system of education may some day be devised, which shall give results, in terms of human development, commensurate with the time, money, energy and devotion expended? In such a system of education it may be that mescaline or some other chemical substance may play a part by making it possible for young people to “taste and

see" what they have learned about at second hand . . . in the writings of the religious, or the works of poets, painters and musicians.

(Letter to Dr. Humphrey Osmond, April 10th, 1953—in Horowitz & Palmer, 1999, p.30)

In a more literary expression of this notion, Huxley's final novel *Island* (1962) portrays an ideal culture that has achieved a balance of scientific and spiritual thinking, and which also incorporates the ritualized use of entheogens as psychospiritual tools in education. It is interesting to note that Huxley maintained this belief in the transformative power of entheogens to the very end of his life, ingesting 200 micrograms of LSD several hours before passing away peacefully on his deathbed (Huxley, 1968). I hope to be able to show that rather than ignoring (or worse, ridiculing) these ideas, educational theorists and practitioners today would do well to begin discussing their merits and how we might implement them.

In this paper I first explore the educational theories of Kieran Egan, who outlines a framework of education that demonstrates the foundational importance of traditionally neglected forms of understanding such as the mythic and somatic. I also outline the philosophical framework of somaesthetics as proposed by Richard Shusterman to further develop the importance of somatic understanding to entheogenic education. Although I have no reason to believe that these respective authors had entheogens in mind when developing their ideas, I will show how their ideas are useful in appreciating the potential of entheogens as educational tools.

My desire to broaden the scope of education to include the experiential learning that can be gained from the circumspect use of entheogens stems from my perception that the term "education," as it has traditionally been used, does not account for the cognitive, aesthetic, somatic and spiritual insights that so many people—both in indigenous cultures and our own—claim they have derived from their entheogenic experiences (Brown & McClen-Novick, 1993; Brown & McClen-Novick, 1995; Eagle, 1997; Saunders, Saunders & Pauli, 2000; Smith, 2000; Tart, 1991). I hope that readers will come to appreciate the value of an expanded conception of education that includes entheogenic experiences and that, ultimately, public policy and educational practice may one day reflect this change. It is also important to note here that the philosophical and intellectual systems of indigenous peoples—most of which already recognize altered states of consciousness as valid and valuable educational experiences—are not generally accepted within the still relatively exclusive domain of mainstream academia (Aikenhead, 1997). Were this not the case, making my point might be a little easier; however, I welcome the challenge of using philosophical discourse to develop an argument for the educational potential of entheogens.

One theoretical framework that encompasses the potential educational value of entheogens is Kieran Egan's conception of education as the acquisition of cognitive tools. Before attempting to show how this is so, I will first give a comprehensive summary of Egan's (1997) ideas as outlined in his book, *The Educated Mind*. Only by fully understanding Egan's challenge of traditional educational theories will it be possible to see how his alternative is valuable both to modern educational practice in general and to my proposal of the educational value of entheogens in particular.

Egan outlines the reasons for his re-conceptualization at the start of the book, noting that modern education as it is practiced in places such as North America is misguided in its very foundations. The problem, as he sees it, arises from education trying to accomplish three tasks, each of which is incompatible with the others. On one hand, education attempts to

homogenize young people by socializing them into the norms and conventions of society, producing citizens who fulfill cultural expectations and perpetuate these central values; on another hand, education follows a Platonic program of seeking truth and to this extent is “a process of learning those forms of knowledge that [give] students a privileged, rational view of reality” (p. 13); on yet a third (?) hand, education follows Rousseau’s program (translated in modern education to Dewey’s progressivism and Piaget’s developmentalism) of allowing young people to develop their individual potentials according to natural processes of psychological growth. Egan makes a strong case for the incompatibility of these three differing agendas and argues that many of the failures of modern education stem from these fundamental misconceptions. Indeed, he observes that:

Socialization to generally agreed norms and values that we have inherited is no longer straightforwardly viable in modern multicultural societies undergoing rapid technology-driven changes. The Platonic program comes with ideas about reaching a transcendent truth or privileged knowledge that is no longer credible. The conception of individual development we have inherited is built on a belief in some culture-neutral process that is no longer sustainable.
(p. 24)

Although each of these educational concepts has some merits to it, according to Egan, only starting afresh with an innovative pedagogical philosophy will allow us to build an educational enterprise that is practicable for the postmodern era.

Egan’s new educational program has ramifications for my proposal of accepting the educational potential of entheogens. His theory combines the 19th century idea of recapitulation with Soviet psychologist Vygotsky’s theory of culturally-mediated cognitive tools. The recapitulation Egan conceives of, however, is not one of forms of knowledge or psychological processes (which he notes has been suggested by educational thinkers in the past, but is fraught with difficulties); rather, it is a recapitulation of the kinds of understanding developed in human cultural history as mediated by particular intellectual tools. The notion of an intellectual tool is central to Vygotsky’s psychological theory (1978), which suggests that human intellectual development is best understood not in terms of accumulated knowledge or psychological stages, but in terms of how an individual’s mastery of his or her culture’s tools—including linguistic modes—shapes cognition. As Egan puts it, “the mind is not an isolable thing like the brain inside its skull; it extends into and is constituted of its socio-cultural surroundings, and its kinds of *understanding* [italics added] are products of the intellectual tools forged and used in those surroundings” (1997, p. 30).

The notion of “understanding” is key in Egan’s educational theory. He proposes that, rather than holding knowledge to be the defining criterion of education, we instead focus on “understanding”—the sense we make of the world through the tools that our culture puts at our disposal. Egan sketches five broad types of understanding that have evolved over the course of human cultural development: Somatic, Mythic, Romantic, Philosophic, and Ironic. Each of these types of understanding is associated with a particular period of human socio-cultural development and is a product of the tools that stimulate its awakening. The process of education, then, is a recapitulation of this development and involves introducing an individual to the tools which facilitate each particular type of understanding. According to this model, one is more or less educated to the degree that one is adept in various kinds of understanding and maximizes one’s facility with the tools associated with that understanding. In Egan’s

words, "we can consider cultural and educational development as connected by the tools that generate common kinds of understanding in both processes" (1997, p. 30).

The types of understanding Egan proposes trace human cultural and intellectual development from before the dawning of language through to the ironic self-reflexivity of postmodernity. The foundation of these is Somatic understanding, a sense of awareness that exists prior to and independent of linguistic capability. As its name would suggest, Somatic understanding denotes "a general embodied kind of understanding that is somewhat distinct from the languaged and conceptual kinds," (1997, p. 162) such as Romantic and Philosophic. Although Somatic understanding is rooted in pre-language-using human culture and is recapitulated prior to and during linguistic development of human infants, it is not supplanted by the development of later types of understanding: "a basic element of . . . cultural context for modern humans is the persistence within the architecture of our minds of a prelinguistic Somatic understanding" (1997, p. 170). However, he also points out that there is a tendency among modern thinkers—and by extension educational administrators, judging by cuts to such school programs as music and physical education—to overemphasize the importance of the linguistic and logical-mathematical in human cognition, ignoring the non-linguistic aspects of human consciousness and awareness. The relevance of Somatic understanding to altered states of consciousness and entheogens is clear, inasmuch as the archetypal entheogenic experience evokes "a rich and overflowing universe of preverbal thought, whose capture is simply beyond the crude mechanisms of syntax and semantics" (Lenson, 1995, p. 150).

The next type of understanding Egan sketches is Mythic understanding, associated with the cognitive tools of oral language use and the narrative, story-telling, and myth-making that accompany it. This kind of understanding is best exemplified by oral (i.e., non-literate) cultural traditions and is recapitulated in the spontaneous discourse of young children in literate cultures. Some of the vital features of Mythic understanding include binary structuring, fantasy, abstract thinking, images and metaphors, and rhythmic language use. Egan argues that, as with Somatic understanding, Mythic understanding ideally remains foundational as facility with other later forms of understanding develops. However, he also observes that this ideal is not always maintained and that the growth of Mythic understanding can result in a denigration or diminishment of the antecedent Somatic understanding: "[language development] seems to involve some loss of the instinctive, vivid, intimately participatory involvement with the natural world that characterizes our fellow mammals' understanding" (1997, p. 67). This perceived loss is one that accumulates with the acquisition of further types of understanding, although Egan argues that the educational approach explicit in his theory is to attempt to minimize such losses.

Egan's other types of understanding are Romantic, Philosophic, and Ironic. Romantic understanding (not to be confused with the artistic Romantic movement of the 19th century) Egan associates with the human cultural development of alphabetic literacy and is recapitulated in modern cultures in children who are learning to read, from mid-childhood to early puberty. Some of the characteristics of Romantic understanding include determining the limits of "reality," the extremes of experience, nascent rationality, and humanized knowledge. In terms of cultural development, Egan argues that a good example comes from Hellenistic Greece, when there was a shift from Homeric mythological thinking to attempted accuracy and realism in the histories of Herodotus. However, Egan notes that despite an emphasis on

rationality and realism in Western culture and education, the shift to Romantic thinking entails a loss, an "alienation from characteristics of Mythic understanding" (1997, p. 97).

Egan identifies the next type of understanding, Philosophic, with the early Greek program of seeking truth and generality, as exemplified by Plato and Aristotle. Ultimately, this type of understanding—which "exercises and develops the capacity to see patterns, search for the recurrent, perceive processes, look for essences, and make ordering principles and theories" (1997, p. 134)—is carried into modern Western culture through the intellectual movements of the Enlightenment, the scientific revolution, and 20th century modernism. The recapitulation of Philosophic understanding in contemporary education is not difficult to see, as it is the dominant form of understanding promulgated in secondary schools and universities today. Once again, however, Egan cautions against the educational impoverishment that an exclusive focus on Philosophic understanding tends to bring about: "the main loss stems from the Philosophic tendency to embrace a narrow, disembodied rationality, which links itself with the cognitive but distances itself from the affective" (1997, p. 135). The pursuit of truth emphasized in Philosophic understanding obviates the faculties of emotion and imagination, essential aspects of the more foundational types of understanding of the Somatic and Mythic.

The final type of understanding in Egan's schema is Ironic understanding. This type borrows elements of Philosophic understanding—most notably the use of schemes to generalize about the world—but recognizes the limitations of such schemes. Egan traces Ironic understanding to Socrates' implausible denials of knowledge (e.g. "I only know I know nothing"), but sees such thinking taken too far in the collapse of metanarratives and abandonment of truth-seeking in deconstructive postmodern thinking. This latter project, although useful in challenging hegemony and disrupting rigidly constrained traditional forms of thinking, too often self-refutingly results in a breakdown in the possibility of narrative, which "corrodes confidence, dissolves meaning, and undermines all claims of intellectual security" (1997, p. 148). Egan sees Ironic understanding as a balance, a self-reflexive awareness that "gains the theoretic generalizing capacity of Philosophic understanding while keeping ironically in check the easy belief that truth resides in general schemes" (*ibid.*, p. 157). It has the potential to provide a kind of empowering flexibility, allowing one to pragmatically incorporate the tools of other types of understanding without idealizing the epistemic status of one over the others. However, too often the more foundational forms of understanding (i.e. Somatic and Mythic) are waylaid through the course of an individual's educational development and are not retained to the full extent that is educationally desirable.

Egan's criticism of the modern program of education is that its attempt simultaneously to socialize young people, to inculcate knowledge, and to foster self-actualization results more often than not in failing to achieve any of these objectives. His alternative suggestion is that education be conceived of as a recapitulation of human development of different forms of understanding using a Vygotskian notion of cognitive tools. His outline of the types of understanding—Somatic, Mythic, Romantic, Philosophic, and Ironic—shows how these are already familiar to us and exist, to a greater or lesser degree, within education today. One of the caveats Egan submits, however, is that as an individual progresses through the development of types of understanding, the latter types tend to overshadow the earlier ones. In his words, "the gains that come with each new set of intellectual tools . . . [entail] some loss of the understanding associated with the prior set" (1997, p. 7); he reiterates this later in his text, noting that cognitive "developments are largely cumulative, but not entirely so; each cumulative addition seems to entail some loss" (*ibid.*, p. 175). The challenge for educators is

to develop and maintain as fully as possible the various types of understanding—to try not only to facilitate the growth of the later understandings such as Philosophic and Ironic, but also not to neglect and allow a withering of the more foundational types of understanding such as the Somatic and Mythic.

If one extends the concept of “tool” to a plant or a drug, it becomes much more apparent how circumspect use of entheogens might be educationally beneficial. The Vygotskian notion of a psychological tool refers not merely to the physical devices fashioned to aid material production, but more broadly to those means of symbolic and/or cultural mediation between the mind and the world (Cole, 1996; Vygotsky, 1978; Wertsch, 1991). Defining a psychoactive drug as a tool—perhaps a novel concept for some—invokes its capacity to effect a purposeful change on the mind/body. Commenting on Vygotsky’s notions of psychological tools, John-Steiner and Souberman (1978) note that “tool use has . . . important effects upon internal and functional relationships within the human brain” (p. 133). The significance of this observation becomes even more literal when the tools in question are plants or chemicals ingested with the intent of affecting consciousness through the alteration of brain chemistry. Indeed, psychoactive plants or chemicals seem to defy the traditional bifurcation between physical and psychological tools, as they mediate between both body and mind (and, some would say, spirit). However, it is important to note that the educational value of entheogens comes not necessarily from their immediate neuropsychological effects, but more importantly from the social practices into which their uses have traditionally been incorporated. The ritual component of entheogen use in established practices should be considered integral to beneficial outcomes.

Ethnographic and historical reports offer abundant evidence attesting to the value of using entheogenic plants in fostering a kind of existential or cosmological wisdom that corresponds well with Egan’s Somatic and Mythic understandings. The sacraments Soma and *kykeon*, used in ancient Vedic and Hellenistic rituals, respectively, are paradigmatic examples of entheogens that awakened the partaker’s sense of Somatic and Mythic understanding in venerable ways (Wasson, 1968; Wasson, Hofmann & Ruck, 1978). Likewise, the uses of psilocybin mushrooms, peyote cactus and ayahuasca—to name but a few entheogens used by indigenous peoples of the Americas—show a similar employment of these tools from the plant kingdom to offer profound epistemological insights (Ott, 1996; Schultes & Hofmann, 1992;). Of course, entheogens are by no means the only means available to re-awaken foundational types of understanding in puberty or adulthood—shamans and others use a variety of techniques in ritual to induce mindbody states that serve just such a purpose: dancing, drumming, chanting, fasting, sensory deprivation or stimulation, meditation, exposure to extremes of temperature (Eliade, 1964; Jilek, 1982; Kenny, 1982;). Indeed, altering consciousness in some fashion is a time-honoured method in many cultures of reconnecting the linguistically acclimatized adult to a direct, yet ineffable experience of *mythos*. However, I have chosen to champion the cause of entheogens because of both their effectiveness as tools and the curious discrepancy between the history of their veneration and use by various cultures on the one hand, and the stigmatization that characterizes present-day socio-political attitudes towards these tools on the other.

The notion that a foundational mythic understanding is as essential to a balanced, well-rounded person as the logic and rationality promulgated in modern educational institutions—which, by themselves, leave us psycho-spiritually impoverished or incomplete—is similarly proposed by Stephen Larsen (1976) in his book *The Shaman’s Doorway*. Larsen assesses the

condition of modernity thus: "our collective response to a demythologized, industrialized, technological environment is an escalating cycle of alienation, dissociation, confusion" (p. 8). He posits mythic imagination as an integral aspect of human nature, but one which modern Western culture has abandoned in a Faustian bargain for the accrual of material commodities yielded by a myopic scientific world-view. Larsen's binary model of cognition (mythic vs. scientific) is simplistic in comparison with Egan's more sophisticated quinquupartite one, but both make the same essential point that a loss is entailed by privileging rationality (or Philosophic and Ironic understandings). Interestingly, Larsen makes a compelling case for acknowledging entheogens as tools having the potential to rectify the imbalance: "psychedelics have shown us that the realm of myth is present in the here and now, and what is required is simply to alter one's state of consciousness, attuning it to this other dimension just a hair's breadth away" (p. 7). And although other methods can also achieve this, to ignore the power of entheogens is to neglect some of the most important historically and pan-culturally revered tools known to humanity.

Kieran Egan makes the case that the most fundamental type of understanding—prior even to Mythic in cognitive development—is the Somatic, an embodied, non-linguistic understanding that is underrepresented, if not mostly disregarded, in contemporary educational practice. To appreciate much more fully the importance of Somatic understanding, and to see the potential of entheogens as tools to nurture it, I will turn now to a recent theoretical construct developed by Richard Shusterman, "somaesthetics" (1997; 1999). Shusterman's proposed discipline formalizes an approach to bodily-kinesthetic awareness in a rigorously philosophical manner, and much more comprehensively than the gloss that Egan gives it. Like Egan, Shusterman takes Somatic understanding to be something essential to human awareness, aesthetic appreciation, and (although he does not address the issue specifically), educational growth. However, unlike Egan, Shusterman puts forward a detailed argument about the myriad values and dimensions of the somatic, as well as practical examples of how they relate to life and practice.

In *Practicing Philosophy*, Shusterman (1997) examines what it means to be a "philosopher." He contrasts the distanced, cerebral approach seen in the professionalization of contemporary academic philosophy with the "hands on" attitude taken by original practitioners such as Diogenes and Socrates, who wrote nothing but conducted themselves in a way consistent with their view that philosophy was "the art of living" (1997, p. 2). As Shusterman puts it, "the idea of philosophy as a deliberative life-practice that brings lives of beauty and happiness to its practitioners is as foreign to professional philosophy today as astrology is to astrophysics" (*ibid.*, p. 3). One of his stated goals in developing his own theories is to diminish the marginality of philosophical thinking and the sense among lay people that philosophy is irrelevant to our lives, and instead to revive the antiquated notion that philosophy is about "self-help" and living well. Shusterman asks his readers to embrace the long-forgotten premise that "philosophy's solutions to life's riddles are not propositional knowledge, but *transformational practice* [*italics added*]" (*ibid.*, p. 25). The limits of logic and language are a central concern for Shusterman, which is why he champions the epistemological importance of non-discursive experience to give a "full account of human reality" (*ibid.*, p. 167). I agree with Shusterman's (and Egan's) perspective that the somatic is much more philosophically important than has traditionally been recognized, and go further to suggest that among the most neglected of potentially transformational non-discursive experiences are altered states of consciousness, particularly those induced by entheogens.

Shusterman (1999) introduces the discipline of somaesthetics by delving into its progenitor, the theory of aesthetics, as it was first articulated by 18th century German philosopher Alexander Baumgarten. According to Shusterman, aesthetics as it was envisioned by Baumgarten was much broader than its present relatively narrow disciplinary scope of fine art and natural beauty. Baumgarten saw aesthetics as the philosophical science of sensory perception, but one which was as much a normative practice as it was a theoretical enterprise. He distinguished between natural aesthetics, which includes “the innate workings of our cognitive faculties and their natural development through non-systematic learning and exercise” (Shusterman, 1999, p. 300), and artificial aesthetics, which involves a systematic program of refining these faculties through practical exercise or training. That Baumgarten’s aesthetics included a strong pragmatic component is appealing to Shusterman; however, he points out that Baumgarten conspicuously omits almost any reference to the proprioceptive sense or the physical body, and when he does, he uses the pejorative Latin term *caro*—i.e. ‘flesh’—which, reflecting contemporary religious mores, connotes sin and carnality (ibid., p. 301). Shusterman argues that Baumgarten’s distaste for the somatic also stems from his embeddedness in the rationalist tradition (from Descartes through Leibniz), which saw the body as merely mechanistic and something which “could therefore never truly be a site of sentience or sensory perception, let alone knowledge” (ibid., p. 301). Although Shusterman sees Baumgarten’s original formulation of aesthetics as ground-breaking, he argues that it is impoverished by its neglect of somatic experience and that today’s philosophical enterprises will be enriched by bringing bodily experience back within their compass.

Shusterman provisionally defines his new discipline of somaesthetics as “the critical, meliorative study of the experience and use of one’s body as a locus of sensory-aesthetic appreciation (*aisthesis*) and creative self-fashioning” (1999, p. 302). He urges his readers to reinvoke philosophy’s primordial concern for self-knowledge and accordingly to put aside “traditional philosophical prejudice against the body” (ibid.). As an epistemological enterprise, somaesthetics seeks to complement the traditional reasoned critique of sensory perception with a directive “instead to correct the actual functional performance of our senses by an improved direction of one’s body, since the senses belong to and are conditioned by the soma” (ibid.). Shusterman cites the bodily-centered practices of many ancient Greek philosophers, Eastern spiritual practices such as yoga and meditation, and modern Western bodywork techniques such as the Feldenkrais method as examples of techniques that “seek to improve the acuity, health, and control of our senses by cultivating heightened attention to and mastery of their somatic functioning” (ibid.). He also notes the ontological function of somaesthetics, both as a focal point from which we construct ourselves and our world and as “a criterion for personal identity and as the ontological ground (through its central nervous system) for explaining mental states” (ibid., p. 304). It is worth noting that this contrasts radically with many indigenous ontological perspectives which regard spiritual realms accessed through altered states of consciousness as ontologically superordinate to the body and “real” world in which it exists (Eliade, 1964; Furst, 1972).

Shusterman outlines three fundamental dimensions of somaesthetics: analytic, pragmatic, and practical. The analytic dimension “describes the basic nature of bodily perceptions and practices and also . . . their function in our knowledge and construction of reality” (1999, p. 304). In my estimation, the importance of altered states of consciousness and tools such as entheogens to this most intriguing yet inscrutable of philosophical issues is considerable. Relatively few philosophers to date have taken seriously the potential of entheogens to

illuminate the epistemological interface between the ontology of the “objective” world (a drug, an artifact external to the body) and the phenomenology of one’s “subjective” world (the mental effects engendered by taking the drug). Shusterman maintains that the analytic dimension of somaesthetics also includes sociopolitical inquiry, addressing “how the body is both shaped by power and employed as an instrument to maintain it, how the bodily norms of health, skill and beauty, and even the most basic categories of sex and gender, are constructed to reflect and sustain social forces” (1999, p. 304). Again, there are significant implications here for inquiry into the use of drugs—questions raised by Boire (2000) about whether one has inherent rights to “cognitive liberty”, whether one should be able to choose to ingest a substance into one’s body to alter consciousness, what the potential sociopolitical consequences of being so “enlightened” might be (as was a major concern in the 1960s), and what responsibilities one has to oneself and others in the community if one does choose to use drugs. These are questions of not only sociopolitical and jurisprudential importance, but—to the extent that education entails the liberty of the mind—of educational importance as well.

The second dimension of somaesthetics is the pragmatic, a normative enterprise that involves “proposing specific methods of somatic improvement and engaging in their comparative critique” (Shusterman, 1999, p. 304). Shusterman lists a variety of pragmatic disciplines that different cultures have adopted

to improve our experience and use of the body: diverse diets, body piercing and scarification, forms of dance and martial arts, yoga, massage, aerobics, bodybuilding, various erotic arts (including consensual sadomasochism), and such modern psychosomatic therapies as the Alexander Technique, the Feldenkrais Method, Bioenergetics, Rolfing, etc. (*ibid.*, p. 305).

These pragmatic disciplines of somaesthetics fall into two general categories: the representational—which emphasizes the body’s external appearance—and the experiential—which emphasizes the aesthetic dimensions of one’s embodied inner experience. Some critics, Shusterman notes, have argued that “by promoting seductive images of bodily beauty and excellence, somaesthetics [acts] as a tool of capitalist advertising and political repression” (*ibid.*). However, he counters that these indictments place too much emphasis on the representational dimension and depreciate the value of the experiential; such criticisms reflect the prominence of the representational in modern Western culture and the obliviousness to experiential somaesthetics that generally obtains. The suspicion of the desire to alter consciousness (and, particularly in the case of entheogens, of the means of doing so) is a paradigmatic example of this attitude.

The third dimension of somaesthetics is the practical, which Shusterman feels compelled to explicitly distinguish from the pragmatic. Whereas the latter involves the theorizing of assorted methods to develop the soma, practical somaesthetics is the business of “actually practicing such care through intelligently disciplined body work aimed at somatic self-improvement” (1999, p. 307). Too often, says Shusterman, academic philosophers neglect the doing of the things about which they write, and in the case of the somatic, their “commitment to the discursive *logos* typically ends in textualizing the body” (*ibid.*). Explicating the importance of somaesthetic practice is something Shusterman presumably feels is necessary, lest his readers, caught up in passive cerebral exertion, overlook the essence of his argument. The irony is not lost on me of my own discursive attempts to theorize the psychospiritual

understanding that can be gained from ineffable psychedelic or entheogenic somaesthetic experience. At some points I worry that words fail to convey the gist of my argument. The point is well expressed in a telling episode from anthropologist Jeremy Narby's ethnographic work in the Amazon. Narby relates how one of his Ashaninca informants responded to his persistent questioning about the Amazonian entheogen, ayahuasca:

Finally, one of these Ashaninca men said to me, "Brother Jeremy if you want to know the answer to your question, *you have to try ayahuasca* [italics added]. And if you like I can show you sometime." He said it was the television of the forest. And it allowed one to see images and learn things. I didn't really know what he was talking about [until after experiencing ayahuasca].

(*qtd. in Hill & Shorten, 2001*)

This anecdote illustrates quite well an indigenous person's recognition of the limits of language to capture the phenomenology of mindbody states radically different from everyday experience. It also reinforces the value of the understanding that many indigenous peoples derive from the somaesthetic practice of using entheogens.

Shusterman offers the 20th century academic Michel Foucault as an exemplar of a philosopher whose life and work reflected an implicit concern for somaesthetics. According to Shusterman, some of Foucault's ideas reflect a central concern for the body as text—for example, addressing how "docile bodies' [are] systematically shaped by seemingly innocent body-disciplines to advance certain sociopolitical agendas" (1999, p. 309). Besides this analytic approach, Foucault proposed pragmatic methodologies by which one could "overcome the repressive ideologies entrenched in our docile bodies" (*ibid.*). And, finally, Foucault implemented his ideas in part by experimenting with drugs. According to one of his biographers, James Miller (1993), Foucault's first (and only) experience with LSD in Death Valley in 1975—what Foucault designated a "limit experience"—inspired in his thinking "a dramatic new turn, transforming, in paradoxical and surprising ways, his continuing effort to illuminate what Nietzsche had called 'the riddle which man must solve'—the riddle of his own singular being" (Miller, 1993, p. 245). The trip ended up being "what [Foucault] would later call the greatest experience of his life" (*ibid.*). Shusterman observes that "one can hardly deny the value of drugs . . . for the precise projects of somaesthetics that Foucault was personally most concerned with, projects of radical innovation" (1999, p. 309). Foucault's adventure with the entheogenic compound LSD represents a willingness to explore avenues of understanding in a way that demonstrates his implicit commitment to an integration of somaesthetic theory and practice.

I believe that Shusterman's somaesthetic theory has perhaps some of its most important implications for the project of a transformative education such as that outlined by ecologically-concerned educators who contend that Western culture requires a reconnection to the Earth and its non-human inhabitants (Bowers, 1993; O'Sullivan, 1999; Smith, 1998). Lakoff and Johnson (1999) argue in *Philosophy in the Flesh* that Western culture—particularly in the post-Cartesian modern era—has been operating under the erroneous philosophical assumption that the functions of the human mind can be divorced from the body, which has implications for spirituality. I believe that this absence of the soma in both the aesthetic (Shusterman, 1997) and the metaphysical (Lakoff & Johnson, 1999) realms of philosophy has contributed to the Western desecration of nature and our present ecological crisis (Berry, 1988; Metzner, 1993). In his *Spell of the Sensuous*, Abram (1996) makes an

explicit connection between a sensual or embodied appreciation for the natural world and an ability to cognize our interdependence with our environment and form an ecologically-informed metanarrative about our respectful place in nature. Entheogens used in appropriate contexts might be useful tools to contribute to both a re-awakening of the soma and a concomitant appreciation of nature.

The main purpose of this paper has been propose that educators accept the potential educational value of entheogens. Having laid out a theoretical argument as to how they might function educationally, the time has come to discuss praxis, or how the theory could be put into practice. One of the common responses, when I initiate discussion on this topic, is incredulity: "So you want to hand out LSD to eighth-grade students?" My rejoinder to such comments is that not only would this be irresponsible, but it would also be ineffectual in terms of following the implicit protocols governing traditional entheogenic practices. It is important here to reiterate the distinction I draw in my introduction between "entheogen" and "psychedelic". Although many young people of high school age are using "psychedelic" drugs such as psilocybin mushrooms and LSD recreationally—sometimes even during school time—it is highly unlikely (although not necessarily impossible) that such use often allows for the "entheogenic" potential of the substance qua spiritual tool to manifest itself. As I touch on above, it is not necessarily only the substance itself that functions in this capacity; rather, factors such as set, setting, and a mythocultural milieu that sanctifies the tool and the experience it can engender are primary criteria for deriving educational benefits from entheogen use. This being said, I do think that there are ways that entheogens could be incorporated as a 21st century educational practice.

One educational project that might serve as a secular archetype for a contemporary entheogenic educational practice is the experiential learning program of Outward Bound. The Outward Bound program, initially conceived as a means of preparing men for survival at sea during the Second World War (Miner & Boldt, 1981), has become an internationally recognized means for boys, girls, women and men to cultivate character and achieve personal growth. Although there are different types of courses to choose from, they all adhere to a fundamental philosophy: "to help people discover and develop their potential to care for themselves, others and the world around them through challenging experiences in unfamiliar settings" (www.outward-bound.org). I believe that this philosophy and the basic format of the Outward Bound program—taking small groups of people with experienced guides into a natural setting for activities that promote group bonding and personal transformation—could be readily adapted to fit an entheogen session as the zenith of the experience. An apt name for this modified program might be "Inward Bound" (J. G. Ince, personal communication, March 26, 2000).

Some immediate objections likely spring to mind. One of these is the issue of the legality of psychedelics/entheogens. I admit this is a concern at a present pragmatic level, but note that laws are socio-historical contingencies and are subject to revision—what was heresy yesterday is sometimes orthodoxy tomorrow. A growing number of countries are beginning to recognize the inherent human right—enshrined, at least for indigenous peoples, in the 1971 Convention on Psychotropic Substances (United Nations, 1977, Article 32)—to use entheogens as sacraments (Adelaars, 2001); an analogous case might be made for similarly allowing educational programs. Even the strongly prohibitionist United States permits the ritual use of peyote for Native Americans (Smith & Snake, 1996). So although the illegality

of entheogens may pose an ostensible impediment, it does not seem to be an insurmountable problem.

Another more serious objection is that psychedelics/entheogens pose an element of risk that is unacceptable for an educational practice. To this, I have several responses. First, entheogens actually pose a very low risk of adverse physiological reactions in comparison to other psychoactive drugs, or even therapeutic medications (Grinspoon & Bakalar, 1979/1998): Weil and Rosen (1993) observe that, "in purely medical terms, [psychedelics] may be the safest of all known drugs" (p. 84) and Julien (1998) notes that LSD is "a remarkably nonlethal compound" (p. 362). The risk most associated with psychedelics/entheogens is that of adverse psychological reaction. I admit that this is a concern, but suggest that, as the entheogenic practices of indigenous peoples indicate, a set and setting conducive to a culturally-valued transformative experience, with respected elders serving as guides, offers an element of security that does not exist for recreational users (Grob, et al., 1996; Larsen, 1976; Zinberg, 1984)

Another response I offer to those who object to the element of risk associated with an experiential learning practice involving entheogens is that some rewarding endeavours—drugs or no drugs—will always involve uncertainty. Certainly Outward Bound itself can make no claims to being risk-free: within the first twenty years of its operation in the United States, it saw no fewer than thirteen students and two instructors lose their lives in various accidents (Miner & Boldt, 1981, pp. 253-254). Of course, the question of health and safety are paramount, and every reasonable precaution ought to be taken to minimize risks. In the case of an entheogenic educational practice, these might involve such elements as a qualifying medical exam (including psychiatric screening), a low participant-to-guide ratio, and a condition of minimum age for participants; minimizing risk would *definitely* involve accepting only willing participants, preparing them for the experience (for months, perhaps even years) with both interpersonal and intrapersonal activities, and providing appropriately assessed and measured doses of whichever substance is to be used. Although the question of risk is an important one, risk-taking is a foundational aspect of learning and growth (Blume, 2001).

Following an Outward Bound model is only one possibility for an entheogenic educational practice, and I would hope that others may present themselves as the notion of such a transformative pedagogy gains currency among educators and theorists. But my commitment to education raises another important question: why bother to bring something that works fine as a spiritual practice into the realm of education? Why not leave entheogen use where it seems naturally to belong, in the domain of spirituality or religion? My response is that I do not see the domains of education and spirituality as mutually exclusive. To be sure, traditions such as those of some American indigenous peoples are definitive examples of entheogen use, and these are *prima facie* religious practices; however, I believe that they are also educational practices, although not in the modality of school-based learning, which in its standard incarnation relies heavily on prescribed outcomes measurable via standardized tests. The rituals of entheogen-using societies are more than just religious or healing ceremonies, they are educational practices (in the broadest sense of the term) and provide experiential understanding or wisdom that, although invaluable within their own cultural frameworks, is not considered valid within the modernist paradigm that dominates contemporary Western educational thought. The need in Western culture to provide experiences of wonder and awe, and to provide the experiential foundation for a spiritual connection to the Earth has never

been greater. I hope that my arguments in this thesis serve to encourage educators and others to see the benefits of renewing a respect for entheogens as ancient cognitive and spiritual tools appropriate to this undertaking.

Art has long been recognized as an important stimulus for cultural change—a mode of positing possibilities for the world—and many good ideas, before being realized in cultural practices, are expressed first in artistic vision. In the case of entheogens, one artistic vision of their educational value came in Aldous Huxley's (1962) last novel, *Island*. Huxley had been introduced to "hallucinogens" in the form of mescaline and was immediately and profoundly convinced of their value to humanity (1954/1971). For the next ten years, until the end of his life, he occasionally availed himself of substances such as psilocybin and LSD and never lost his conviction as to their utility as agents capable of mystical transcendence and revelation (Huxley, 1968). In Huxley's own words, his novel *Island* is "a kind of pragmatic dream" (1962/1999), and offers a contemplative alternative to his dismal vision of *Brave New World* (1932/1946).

In *Island*, Huxley (1962), a thoroughly modern Englishman arrives in Pala, a fictional land threatened by the forces of economic imperialism and globalization, and discovers a society that has found a harmonious balance between Western scientific thinking and theogenically-inspired mysticism. Palanian education involves the ritual use of a local mushroom, the "*moksha*-medicine" (p. 157), as a rite of passage for adolescents and as a means of counteracting the analyticity of scientific training, of stimulating aesthetic delight, of inculcating an ethic of care for both other people and the environment, and of providing "beatific glimpses . . . of enlightening and liberating grace" (p. 197). The story culminates with an initiatory experience of the *moksha*-medicine by the *ausländer* protagonist, a section of the book in which Huxley vividly depicts the phenomenology of an entheogenic/psychedelic experience; for example:

Will dropped his eyes. The grain on the floorboards was a brown river, and the brown river was an eddying, ongoing diagram of the world's divine life. At the center of that diagram was his own right foot, bare under the straps of its sandal, and startlingly three-dimensional, like the marble foot, revealed by a searchlight, of some heroic statue. "Boards," "grain," "foot"—through the glib explanatory words the mystery stared back at him, impenetrable and yet, paradoxically, understood. Understood with that knowledgeable understanding to which, in spite of sensed objects and remembered names, he was still open.

(1962, p. 318)

The final sentences in particular exemplify, in my interpretation, Huxley's implicit commitment to forms of understanding such as Egan's and Shusterman's Somatic understanding. In *Island*, Huxley's artistic representation of how entheogens might be used as educational tools displays some characteristics of traditional indigenous ceremonial practices, but is clearly also a product of artistic license, necessarily filtered through his own education, socialization and idiosyncratic spiritual philosophies (Bedford, 1974). Nevertheless, I believe it offers a perceptive and exemplary model of the potential of entheogens as educational tools and deserves serious consideration not only for its literary merit but also as a philosophical commentary on education.

I have tried to show in this paper that Aldous Huxley's belief in entheogens as particularly appropriate tools for education is not merely a pipe dream. Rather, this notion hearkens back to rich and varied practices of using and learning from "plant teachers" in

many cultures throughout history and in different parts of the world. The ideas put forth by Kieran Egan and Richard Shusterman offer frameworks which effectively accommodate entheogens as educational tools. I do not propose that entheogens are a panacea for all that ails contemporary education (or society for that matter); however, I do think present educational malaise warrants a reappraisal of traditional entheogenic practices as models of how we might use such tools to stimulate a curiosity about the larger questions of human existence and the cosmos and to foster the mythical and somatic understandings that inform an educated mind.

REFERENCES

- Abram, D. (1996). *The spell of the sensuous: Perception and language in a more-than-human world*. New York: Pantheon Books.
- Adelaars, A. (2001, 21 April). Court case in Holland against the use of ayahuasca by the Dutch Santo Daime Church. Retrieved January 2, 2002 from http://www.santodaime.org/community/news/2105_holland.htm
- Aikenhead, G. S. (1997). Toward a first nations cross-cultural science and technology curriculum. *Science Education*, 81, 217-38
- Bedford, S. (1974). *Aldous Huxley: A biography—volume two: 1939-1963*. London: William Collins Sons & Co.
- Berry, T. (1988). *The dream of the earth*. San Francisco: Sierra Club Books.
- Blume, L. D. (2001). *Choosing risk: Embracing possibility in teaching and learning*. Unpublished master's thesis, Simon Fraser University, Burnaby, British Columbia, Canada.
- Boire, R. G. (2000). On cognitive liberty (Part One). *Journal of Cognitive Liberties*, 1, 7-13.
- Bowers, C. A. (1993). *Education, cultural myths, and the ecological crisis: Toward deep changes*. Albany, NY: State University of New York Press.
- Brown, D. J., & McClen-Novick, R. (Eds.). (1993). *Mavericks of the mind: Conversations for the new millennium*. Freedom, CA: Crossing Press.
- Brown, D. J., & McClen-Novick, R. (Eds.). (1995). *Voices from the edge*. Freedom, CA: Crossing Press.
- Cole, M. (1996). *Culture in mind*. Cambridge, MA: Harvard University Press.
- Eagle, B. (Producer). (1997, February 2). Psychedelic science. *BBC's Horizon*. [Television broadcast]. Transcript retrieved February 4, 2002 from: <http://www.bbc.co.uk/science/horizon/psyche.shtml>
- Egan, K. (1997). *The educated mind: How cognitive tools shape our understanding*. Chicago, IL: University of Chicago Press.
- Eliade, M. (1964). *Shamanism: Archaic techniques of ecstasy*. (W.R. Trask, Trans.). New York: Pantheon Books.
- Furst, P. T. (Ed.). (1972). *Flesh of the gods: The ritual use of hallucinogens*. New York: Praeger Publishers.
- Fuller, R. C. (2000). *Stairways to heaven: Drugs in American religious history*. Boulder, CO: Westview Press.
- Grinspoon, L., & Bakalar, J. B. (1998). *Psychedelic drugs reconsidered*. New York: The Lindesmith Center (Original work published 1979).

- Grob, C. S., McKenna, D. J., Callaway, J. C., Brito, G. C., Neves, E. S., Oberlander, G., et al. (1996). Human psychopharmacology of hoasca, a plant hallucinogen used in ritual context in Brazil. *The Journal of Nervous and Mental Disease*, 184, 86-94.
- Hill, D. (Writer & Host), & Shorten, L. (Producer). (2001, October 15). *Stoned Straight* [Radio broadcast]. Toronto, Ont.: Canadian Broadcasting Corporation.
- Horowitz, M., & Palmer, C. (Eds.). (1999). *Moksha: Aldous Huxley's classic writings on psychedelics and the visionary experience*. Rochester, VT: Park Street Press.
- Huxley, A. (1946). *Brave new world: A novel*. New York: Harper & Row. (Original work published 1932).
- Huxley, A. (1962). *Island*. New York: Harper & Row.
- Huxley, A. (1971). *The doors of perception & heaven and hell*. Middlesex, England: Penguin Books. (Original work published 1954).
- Huxley, L. A. (1968). *This timeless moment: A personal view of Aldous Huxley*. New York: Farrar, Straus & Girous.
- Huxley, A. (1999). Letter to H. H. Maharaja Dr. Karan Singh, December 22, 1962. In Horowitz, M. & Palmer, C. (Eds.), *Moksha: Aldous Huxley's classical writings on psychedelics and the visionary experience* (p. 236). Rochester, VT: Park Street Press.
- John-Steiner, V., & Souberman, E. (1978). Afterword. In L. Vygotsky, *Mind in society: The development of higher psychological processes* (p. 121-133). Cambridge, MA: Harvard University Press.
- Jilek, W. (1982). *Indian healing: Shamanic ceremonialism in the Pacific Northwest today*. Surrey, B.C.: Hancock House.
- Julien, R. M. (1998). *A primer of drug action: A concise, non-technical guide to the actions, uses, and side effects of psychoactive drugs* (8th ed.). Portland, OR: W.H. Freeman & Company.
- Kenny, C. B. (1982). *The mythic artery: The magic of music therapy*. Atascadero, CA: Ridgeview Publishing.
- Lakoff, G., & Johnson, M. (1999). *Philosophy and the flesh: The embodied mind and its challenge to Western thought*. New York: Basic Books.
- Larsen, S. (1976). *The shaman's doorway: Opening the mythic imagination to contemporary consciousness*. New York: Harper & Row.
- Lenson, D. (1995). *On drugs*. Minneapolis, MN: University of Minnesota Press.
- Lewin, L. (1997). *Phantastica: A classic survey on the use and abuse of mind-altering plants*. Rochester, VT: Park Street Press. (Original work published 1924).
- Metzner, R. (1993). The split between spirit and nature in European consciousness. *Trumpeter*, 10,1. [Online version]. Retrieved February 13, 2002 from: <http://trumpeter.athabascau.ca/content.back/v10.1/Metzner.html>
- Miller, J. (1993). *The passion of Michel Foucault*. New York: Simon & Schuster.
- Miner, J. L., & Boldt, J. (1981). *Outward Bound U.S.A.: Learning through experience in adventure-based education*. New York: William Morrow and Company.
- O'Sullivan, E. (1999). *Transformative learning: Educational vision for the 21st century*. Toronto, Ont.: University of Toronto Press.
- Ott, J. (1996). *Pharmacotheon: Entheogenic drugs, their plant sources and history* (2nd ed.). Kennewick, WA: Natural Products Co.
- Peters, R. S. (1966). *Ethics and education*. London: Allen & Unwin.

- Ruck, C., Bigwood, J., Staples, D., Ott, J., & Wasson, R. G. (1979). Entheogens. *The Journal of Psychedelic Drugs*. 11(1-2), 145-146.
- Rudgley, R. (1994). *Essential substances: A cultural history of intoxicants in society*. New York: Kodansha International.
- Saunders, N., Saunders, A., & Pauli, M. (2000). *In search of the ultimate high: Spiritual experiences through psychoactives*. London: Rider Books.
- Schultes, R. E., & Hofmann, A. (1992). *Plants of the gods: Their sacred, healing, and hallucinogenic powers*. Rochester, VT: Healing Arts Press.
- Shorter Oxford English Dictionary* (3rd ed.). (1973). Oxford: Oxford University Press.
- Shusterman, R. (1997). *Practicing philosophy: Pragmatism and the philosophical life*. New York: Routledge.
- Shusterman, R. (1999). Somaesthetics: A disciplinary proposal. *The Journal of Aesthetics and Art Criticism*. 57, 299-313.
- Smith, H. (2000). *Cleansing the doors of perception: The religious significance of entheogenic plants and chemicals*. New York: Tarcher-Putnam.
- Smith, H., & Snake, R. (Eds.). (1996). *One nation under god: The triumph of the Native American church*. Santa Fe, NM: Clear Light Publishers.
- Smith, M. J. (1998). *Ecologism: Towards ecological citizenship*. Buckingham, England: Open University Press.
- Tart, C. T. (1991). Influences of previous psychedelic drug experiences on students of Tibetan Buddhism: A preliminary exploration. *The Journal of Transpersonal Psychology*, 23, 139-173.
- Vygotsky, L., (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.
- Wasson, R. G. (1968). *Soma: The divine mushroom of immortality*. New York: Harcourt Brace Jovanovich.
- Wasson, R. G., Hofmann, A., & Ruck, C. P. (1978). *The road to Eleusis: Unveiling the secret of the mysteries*. New York: Harcourt Brace Jovanovich.
- Weil, A., & Rosen, W. (1993). *From chocolate to morphine: Everything you need to know about mind-altering drugs*. Boston, MA: Houghton Mifflin.
- Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.
- Zinberg, N. E. (1984). *Drug, set, and setting: The basis for controlled intoxicant use*. New Haven, CT: Yale University Press.