FACILITATING TRANSPERSONAL EXPERIENCES WITH DEXTROMETHORPHAN: POTENTIAL, CAUTIONS, AND CAVEATS

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ABSTRACT: Dextromethorphan (DXM), a nonprescription psychoactive drug that may lead to spiritual or transpersonal altered states of consciousness, has legitimate therapeutic applications that are being investigated by clinical researchers. It is easily available in over-the-counter cough medicines, and due to its psychoactive properties, DXM is an increasingly popular drug of abuse. Nonmedical use of DXM can lead to dependence and death. Clinical research related to nonmedical DXM use is limited, but many theories and experience reports have been published on the Internet. Nonmedical DXM users may consist of two types: those who seek recreation and those who want to explore their mind (psychonauts). Given the potential importance of DXM-facilitated transpersonal experiences, this article suggests research be conducted on the chemical. The experiences of others must be taken into account before any adequate theory of DXM can be formulated.

Dextromethorphan (DXM) was introduced over-the-counter (OTC) in 1958 (American Medical Association, 1988) as a nonprescription antitussive (cough suppressant). DXM is an opioid, “the D-isomer of levorphanol, a semisynthetic morphine derivative” (McFee, Mofenson, & Caraccio, 2000, p. 123). Several fields of medicine have used DXM therapeutically, which is a relatively safe drug when used for medical purposes (Bem & Peck, 1992; Steinberg, Bell, & Yenari, 1996). DXM is primarily of clinical and research interest because of its neuropharmacological properties. DXM binds to four distinct neuron receptor sites; these are most likely the sigma1, PCP2, sigma2, and NMDA receptor sites (Zhou & Musacchio, 1991). DXM also indirectly inhibits the reuptake of serotonin (International Programme on Chemical Safety [IPCS], 1996). Although DXM was derived from the opiate levorphanol, it does not bind to any of the opiate receptors.

When individuals ingest doses five or more times the recommended dose, DXM becomes psychoactive and has been classified as a dissociative drug (National Institute on Drug Abuse [NIDA], 2001) and a club drug (Parks & Kennedy, 2004). Occasional clinical case reports appear of individuals ending up in the hospital related to negative side effects of their substance use. DXM, however, does not produce withdrawal symptoms characteristic of physically addictive substances, although tolerance does occur (Wolfe & Caravati, 1995).

Existential evidence from outside clinical settings suggests the chemical dextromethorphan (DXM) can facilitate transpersonal experiences. Researcher
Stan Grof (1988) defined a transpersonal experience as “experiential expansion or extension of consciousness beyond the usual boundaries of the body-ego and beyond the limitations of time and space” (p. 38). Researching drug-facilitated transpersonal states is often not socially acceptable, even outlawed. No researcher to date has investigated the possible transpersonal implications of DXM experiences. Considering that DXM is currently a nonprescription drug, research could be conducted with much more ease than with chemicals such as psilocybin (Griffiths, Richards, McCann, & Jesse, 2006) or DMT (Strassman, 2001), which are currently Schedule I substances in the United States (Drug Enforcement Agency, n.d.).

Unfortunately, scholarly information about the psychological aspects of DXM use is scarce. The most detailed information about DXM use comes from websites created by nonmedical DXM users who often report psychedelic and transpersonal experiences. Many nonmedical users of DXM claim their experiences have positive and therapeutic features. The legitimacy of using Internet reports for research is not well founded. According to William James, however, and his doctrine of radical empiricism (James, 1904/1987) all reports of altered states of consciousness are evidence to be considered, so long as the reports are given proper context.

There has been no scholarly research to support the claims of nonmedical DXM users. Nonmedical user reports contain much otherwise unknown data, which sometimes relates to transpersonal psychology. As one example among many:

I was running through a labyrinth of stones that were somehow plant-like and alive. I understood that I was searching for God within the labyrinth; the labyrinth seemed to reply that God could never be found within it, though the path I took through the labyrinth in my search was God.

I still wondered, nonetheless, whether I could “call” some representation of Divinity to my presence. The shapes formed an angular and somewhat abstract illustration of a female, crone-like face. The face, like the rooms, cycled relentlessly from one form to another. I tried to speak to the face, but the visions seemed too incoherent to produce a response—though I got the impression the incoherency itself was an aspect of my own being. (Anonymous, 2000c)

The purpose of this article is to increase the curiosity of the field so that researchers may more accurately investigate the uses and implications of DXM. Presently, a preliminary description or cataloging of DXM-facilitated transpersonal experiences will be attempted. While facts are collected, it would be prudent to consider something that psychiatrist R. D. Laing (1967) wrote:

Even facts become fictions without adequate ways of seeing “the facts.” We do not need theories as much as the experience that is the source of the theory. We are not satisfied with faith, in the sense of an implausible hypothesis irrationally held: we demand to experience the “evidence.” (p. 3)
Professional clinical and medical literature has described the effects of DXM upon human biochemistry. The effects upon human consciousness, however, have not been adequately described.

Scholarly research is called for in order to verify or disprove the transpersonal claims of some nonmedical DXM users. It is a significant problem that this area of research has such a flawed starting point, considering its potential importance. Legal restrictions on the availability of DXM exist in several countries (Bem & Peck, 1992). This author does not condone any illegal activity related to DXM or any other psychotropic drug.

DEFINITIONS

The context of observations implies definitions. If clinicians are interested in the analgesic properties of DXM, perceptual alterations may be noticed and described merely as hallucinations. The experience of the individual, outside of the experience of pain, may not be of worth to the experiment and so reporting on the content of hallucinations may be overlooked. If researchers are interested in trends in adolescent drug abuse, they may notice and describe any reported subjective positive alterations in consciousness as psychotomimetic. Amateur user reports are subject to bias as well.

The topic of drug abuse is controversial. The very term abuse is difficult to define, as different contexts use the word in different ways. For example, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) (American Psychiatric Association, 2000) defines substance abuse in terms of behavior patterns leading to social and legal problems. The National Drug Control Program (1970) defines substance abuse as the illegal use of a drug. By this definition it is impossible to abuse DXM, as the substance is specifically excluded from the Controlled Substances Act of 1970.

Rather than using the word abuse, there are alternatives that are more specific. This article will classify DXM use as either medical or nonmedical in nature. Medical uses for the substance include cough suppression as well as other clinically studied uses, such as those discussed below. Nonmedical use of DXM can fall into two general subcategories. Recreational users take DXM for the sole purpose of having fun and enjoying themselves. Other people use DXM for psychotherapeutic or transpersonal reasons. This group of people will be referred to as psychonauts, a term that denotes exploration of the mind or psyche (Ott, 1995, 2001).

It is likely that recreational use is the predominant form of nonmedical DXM use. None of the scholarly articles reviewed contained distinctions between recreational and psychonautical substance use, merely between use as an antitussive and abuse for any other reason. These authors presumably equated nonmedical use and recreational use. This article will employ the more accurate and insightful categories of medical, recreational, and psychonautical where appropriate.
In the 1980s, DXM became useful to medical researchers as a way to measure a liver enzyme, CYP2D6, that metabolizes many psychoactive substances, including DXM. Researchers need to be aware of any phenotypic variation resulting from genetics or current medications to prevent potential adverse reactions to certain substances. Researchers regularly use DXM to determine the functionality of patients’ CYP2D6 enzymes (Gasche et al., 2004; Kotlyar et al., 2005). For example, Gasche et al. described their methodology as such: “To assess the relative activities of CYP2D6 and CYP3A4, we used both a traditional method [italics added] based on a metabolic-ratio calculation obtained by dividing the amount of dextromethorphan by the amount of deconjugated dextrorphan excreted in urine (for CYP2D6)” (p. 2830).

Additionally, doses of DXM may alleviate many of the symptoms of amyotrophic lateral sclerosis (a motor neuron disease) with manageable side effects (Blin et al., 1996; Brooks et al., 2004; Hollander et al., 1994), facilitate the treatment of detoxification from opiates by reducing withdrawal symptoms and craving (Bisaga & Popik, 2000), protect against ischemic cerebral injury (Steinberg et al., 1996), and reduce aggressive behavior in individuals with developmental disabilities (Welch & Sovner, 1992). Researchers have also investigated the therapeutic potential of DXM for chronic pain (Ben-Abraham & Weinbroum, 2000), postoperative pain (Weinbroum et al., 2001), phantom limb pain (Ben-Abraham, Marouani, & Weinbroum, 2003), and postherpetic neuralgia (Klepstad & Borchgrevink, 1997; Sang, Booher, Gilron, Parada, & Max, 2002; Suzuki, Katto, Saeck, Ogawa, & Suzuki, 1996). Researchers have also examined demographics and habits of nonmedical users of DXM.

The world of professional science is not alone in finding new and interesting reasons for taking DXM. Individuals from around the world (including Australia, Canada, Germany, Sweden, and the US (Cranston & Yoast, 1999) have discovered that taking large amounts of DXM can lead to a uniquely altered state of consciousness. Medical reports of individuals using DXM in order to alter consciousness have been sporadic and mainly anecdotal. Few studies have attempted to examine this phenomenon, and what studies do exist are limited in reliability and validity.

Over the past 40 years, the medical community has become gradually aware of the existence of nonmedical DXM use. The majority of this knowledge has come from letters to editors of medical journals and case reports of users who experienced such significant negative symptoms as to require medical attention. There are at least 30 such case reports in the English language medical journals. The earliest reported cases of nonmedical DXM use are publications from Denmark (Jorgensen, 1967) and Australia (Dodds & Revai, 1967). Dodds and Revai characterized the case of a 23-year-old man by “hyperactive behavior, extreme pressure of thought, marked visual and auditory hallucinations, and
association of sounds with colours” (p. 231). The main psychological changes reported in the entire case study literature include altered time perception; auditory, tactile, and visual hallucinations; disorientation; euphoria; feelings of floating; increased perceptual awareness; paranoia; psychosis; and visual disturbances. Withdrawal from DXM has led to insomnia, dysphoria, and depression (Wolfe & Caravati, 1995). The fact that there are so many reports suggests that taking large amounts of DXM may not be safe.

**KNOWN PHYSICAL DANGERS OF DXM USE**

DXM increases levels of serotonin, and should not be combined with SSRI or monoamine oxidase inhibitor (MAOI) medication as doing so may lead to serotonin syndrome (Hansten & Horn, 1989; Skop, Finkelstein, Mareth, Magoon & Brown, 1994). A recent review of the toxic serotonin syndrome contained, “Signs of excess serotonin range from tremor and diarrhea in mild cases to delirium, neuromuscular rigidity, and hyperthermia in life-threatening cases” (Boyer & Shannon, 2005, p. 1112). Seizures (IPCS, 1996), respiratory depression (Katona & Wason, 1986), coma (Schneider, Michelson, Boucek & Ilkhanipour, 1991), and death (Gosselin, Roger, & Harold, 1981; Rammer, Holmgren, & Sandler, 1988) have been noted following large doses. DXM is not addictive (IPCS, 1996), although chronic use has lead to dependence and tolerance (Melick-Shield, Barloon & Liesveld, 2005) and withdrawal has led to craving (Wolfe & Caravati, 1995).

The medical literature is vague as to what amounts of the substance cause these dangerous conditions, as the individuals seen in the emergency room sometimes do not remember or do not wish to disclose how much DXM they took or whether they took other chemicals as well. The users’ CYP2D6 phenotypes are rarely looked at, which could have serious implications related to dosage and negative physical and psychological effects (Gasche et al., 2004). Much of the information comes from users who consumed many doses of OTC cough medicines, which complicates the situation in two ways. First, OTC products often contain other active ingredients, such as analgesics, antihistamines, and/or expectorants, which can cause severe negative physical reactions if taken in large quantities (IPCS, 1996). Second, the DXM in OTC medicines is of the hydrobromide salt (HBr) form, which may lead to bromide poisoning in large, chronic doses. In addition, the IPCS stated, “Monitoring dextromethorphan serum levels is not useful clinically in the overdose situation because a correlation between levels and clinical effects has yet to be determined” (section 8.5).

Taking large doses of DXM has its dangers. It is not yet clear what the relative dangers are of acute versus chronic high doses of DXM and how much of the negative effects are attributable to a combination of DXM and other chemicals, licit or illicit. Nevertheless, it is likely that the above case reports do not represent the average nonmedical DXM user. As with any population of nonmedical substance users, there are no doubt far more people who do not end up in the hospital and continue to use the substance.
Surveys about DXM Use

Given both a lack of reported benefits and a potential for physical harm, several researchers have conducted exploratory surveys with the aim of determining the extent of DXM use among various populations of adolescents and young adults. Five surveys attempted to describe the demographics of nonmedical DXM users (Banerji & Anderson, 2001; Bryner et al., 2006; Darboe, Keenan, & Richards, 1996; Noonan, Miller, & Feeney, 2000; Parks & Kennedy, 2004), two of which assumed adolescents were the primary nonmedical users of DXM (Darboe et al., 1996; Noonan et al., 2000).

There are likely many reasons why people consume DXM nonmedically. If DXM experiences are to be related to transpersonal psychology, it may be useful to discuss why people take this substance. One scientific theory suggested why adolescents use DXM nonmedically. Darboe (1996) wrote that nonmedical use of any OTC drug was as a substitute when substances that were more preferable were not available. First, this results in an infinite regression whereby the use of one drug is always precluded by the use of another drug. Second, this rejects the possibility that a drug may have unique effects, unlike anything a user has previously experienced, which the user purposively seeks out subsequently.

Based upon his four hypotheses, Darboe (1996) suggested that cough syrups will be used nonmedically more often than Tylenol pills because of the increased social acceptability and decreased intimidation relating to the former. While this may be true, he did not mention another possibility, that adolescents do not abuse Tylenol pills because they are not psychoactive. Perhaps to strengthen his own argument, Darboe simultaneously published his theory and a survey (Darboe, Keenan, & Richards, 1996) which purportedly sought evidence in support of his theory.

Darboe et al. (1996) conducted this survey using 281 “school per[s]sonnel [sic] of the Waynesboro [Pennsylvania] School District” (p. 636) regarding their perceptions of OTC substance use, including cough syrup use. Darboe et al. sought agreement with the statement “OTC product abuse is mainly a problem among” (p. 143) males, teenagers, senior citizens, and racial minorities. Unfortunately, these results may have limited validity for the following reasons. First, Darboe et al. describe the population of Waynesboro, PA as predominantly rural, blue collar, and Caucasian. School personnel of such demographics may not be aware of the use of OTC products among racial minorities or senior citizens. Second, the survey asked about OTC product abuse generally, not DXM abuse specifically. These items have questionable relevance to the topic of nonmedical DXM use.

Third, participants who agreed that OTC product abuse was mainly a problem among males, teenagers, senior citizens, and racial minorities reached 3, 26, 5, and 5%, respectively. Darboe et al. (1996) considered this confirmation of their hypothesis that nonmedical DXM use is a social problem among teenagers. However, among those who endorsed “teenagers,” the majority of participants
either disagreed (56%) or were uncertain (41%). To conclude, because Darboe et al.’s study is limited in at least three ways, their findings provide little support for Darboe’s (1996) theoretical framework of nonmedical DXM use.

Noonan, Miller, and Feeney (2000) conducted a second survey relating to nonmedical OTC drug use among teenagers. They asked Albuquerque, NM schoolchildren if they “knew of other students who used specific OTC medicines to ‘get high’” (p. 7911). Of 315 surveys, DXM-containing syrups were identified significantly more frequently than non-DXM-containing pills, yet only six percent of respondents selected the name “dextromethorphan.” This seemed to indicate that general knowledge about the active ingredient of the medicines was relatively low among that population. Reported use of DXM also increased significantly with age. This study overlooked the existence of DXM-containing pills, such as Coricidin Cough & Cold. As with the Darboe et al. (1996) study, Noonan et al. assumed that schoolchildren were the primary users of DXM; they did not survey anyone over the age of 18. Noonan et al. partially supported one of Darboe’s (1996) points when they asked students what behaviors they perceived to occur, which is similar to asking what behaviors they perceived to be socially accepted.

Banerji and Anderson (2001), who reviewed all consultations to the California Poison Control System (CPCS) during the first nine months of 2000, conducted the third survey. They were looking specifically for cases involving the OTC product Coricidin Cough & Cold, each pill of which contains 30 mg DXM HBr and 4 mg chlorpheniramine maleate (an antihistamine). Their study suggested that it is primarily teenagers (age range 11–20, mean age 16) who are hospitalized due to nonmedical Coricidin ingestion. The demographics are still unknown for nonmedical users of Coricidin who are not hospitalized as well as users of syrups and powders containing DXM. Banerji and Anderson lent partial support to the assumption of Darboe (1996), Darboe et al., (1996) and Noonan et al. (2002) that teenagers were the main age group using DXM nonmedically. Eighteen (20%) of the 92 patients reported taking another substance in addition to the Coricidin pills. The two most frequent additional substances reported were alcohol and marijuana. This suggests that adolescents may not use DXM solely as a substitute for other drugs, as Darboe (1996) hypothesized.

The fourth survey was conducted by Parks and Kennedy (2004), who classified DXM as a “club drug” because it “causes hallucinations at higher doses and is becoming popular among college students and within the rave culture” (p. 296). Parks and Kennedy stated, “Less than 10% of DXM users (n=13) reported any positive consequences associated with this drug” (p. 300). The authors did not report negative consequences of DXM use. Due to their recruiting methods, the findings are only generalizable to a narrow population: young adults who admit using club drugs. It could be tentatively suggested that this particular demographic does not take, and does not enjoy taking, DXM as much as younger people.
The most recent study included a partial follow-up to the Banerji and Anderson (2001) study. Bryner et al. (2006) also looked at information recorded in the CPCS, as well as in the American Association of Poison Control Centers and the Drug Abuse Warning Network. Records for the years of 1999 through 2004 were searched for references to DXM. Of 1382 cases found, 75% involved adolescents (median age 16) and 59% involved the brand Coricidin. The authors concluded that DXM abuse increased 10-fold during the study period, long-term abuse was uncommon, and there were no fatalities associated with DXM.

In summary, these studies give some suggestions as to who takes DXM nonmedically, under what circumstances, and what form of the substance is most popular. However, they do have strong limitations, as noted, and reveal little about the importance of DXM for transpersonal psychology. What references does the professional literature have regarding the DXM experience, and its potential usefulness to transpersonal psychology?

**Psychological Effects of DXM**

The medical literature reveals little about the way DXM can alter consciousness. Several research reports stated that patients felt “drunk” (Steinberg et al., 1996) or “intoxicated” (Wolfe & Caravati, 1995), but the reports did not go into any more detail. Articles warning of the dangers of nonmedical DXM use claimed that it led to “psychosis” (Dodds & Revai, 1967; Melick-Shield et al., 2005; Schneider et al., 1991; Wolfe & Caravati, 1995) but did not define the term. NIDA (2001) released a report on hallucinogenic and dissociative drugs that stated that low doses of DXM (120 mg) lead to a stimulant effect with distorted visual perception, whereas doses greater than 600 mg lead to “a sense of complete dissociation from one’s body” (p. 7). One of the above-mentioned surveys indicated that DXM creates a “high” that “feels good” (Parks & Kennedy, 2004).

There are no articles elucidating nonmedical DXM user experiences aside from vague phrases such as “dissociation from one’s body” (NIDA, 2001, p. 7) or “seeing animals” (Steinberg et al., 1996, p. 862). One subpopulation of nonmedical DXM users is comprised of people who actively participate in the Internet. Their publications regarding their DXM use are much more descriptive and are readily available for scrutiny and research.

**DXM and the Internet**

Several scholarly articles (Cranston & Yoast, 1999; Schwartz, 2005; Wax, 2002) referenced Internet sites created by both recreational and psychonautical users of DXM. These websites provide amateur research and exploration regarding the psychological and physiological effects of the ingestion of large amounts of DXM. Many of these websites ask empirical questions, seek objectivity in
explaining and characterizing DXM experiences, and submit to a kind of “peer review” of fellow Internet-savvy DXM users.

Schwartz (2005) mentioned, “One unique website is the Third Plateau” (p. 566), although instead of referencing the actual website he referenced another article (Wax, 2002) that referenced the website. The most important aspect of The Third Plateau (White, 2001) is that it hosts the single most detailed DXM-related document, and the main source of information for Internet-savvy nonmedical users: the aptly named DXM FAQ (Frequently Asked Questions; White, 2001). White created this FAQ in 1995 and it now contains 261 pages of information and 379 references. The primary purpose of The DXM FAQ was to reduce deaths due to nonmedical DXM use.

White (2001) advocated harm reduction through the dissemination of accurate information. His FAQ was the result of years of reviewing the scientific literature and interviewing nonmedical DXM users. Cranston and Yoast (1999) reported having found Internet websites “created by laypeople who use the drug and are unaware of medical advice or research related to its use” (p. 99). Clearly, Cranston and Yoast did not find The DXM FAQ, which thoroughly documents the medical research related to DXM use and psychopharmacology. Darboe’s (1996) third hypothesis (knowledge of negative effects reduces abuse) is invalid for the Internet-savvy DXM users who have read The DXM FAQ.

Internet data related to the experiences and motivations of nonmedical DXM users is generally more detailed than clinical data. For example, Schwartz (2005) listed “distortions of motion and speech” (p. 566) as symptoms of oral ingestion of “about 2 mg/kg” (p. 566). The DXM FAQ (White, 2001) listed the same two symptoms at the same dosage. However, instead of Schwartz’s five words, White’s FAQ explained

Even though DXM has a slight “stoning” or intoxicating effect on the first plateau [1.5–2.5 mg/kg oral], there are surprisingly few deficits of cognitive function. Language is the most strongly affected, although these effects are usually limited to occasional word and syllable repetition, spoonerism[s], and difficulty coming up with specific words. … Another identifying characteristic of a first plateau DXM trip is its effect upon motion and motor skills. Users tend to walk and move in specific ways characterized by large, fluid movements. In fact, it may be difficult to perform small or abrupt motion. Motor tasks initiated may continue beyond their targets. To an outside observer, this can seem quite strange, especially the changes in gait. It is possible, however, to move normally. (sections 5.32–5.33)

White’s (2001) summary, as well as first-person user reports, may call into question the crux of Darboe’s (1996) theory: that people use DXM nonmedically purely as a substitute for other drugs. Again, Darboe’s theory does not mention the phenomenological experience of DXM, only the behavior of users. The DXM FAQ (White, 2001) describes many experiences that are unique to DXM. The DXM FAQ contains over 20 pages of detailed analysis of
the effects DXM has on an individual’s state of consciousness, based upon user reports that White collected and analyzed for over six years. The document stressed many times that DXM experiences are unique and unlike the experiences of any other known substance.

The Wax (2002) article and the Banerji and Anderson (2001) report referenced another important DXM-related website, The Vaults of Erowid. This website (Erowid, 2006c) is an online library containing over 30,000 documents related to psychoactive substances. It aims to be a source of nonjudgmental information for the purposes of harm reduction and education. In 2004 they averaged 32,000 unique visitors to their site each day (Erowid, 2006a). One of the most popular vaults is the “Experience Vaults,” which contains 10,435 reports of altered states of consciousness since April 2000 (Erowid, 2006b). There are many possibilities for quantitative and qualitative analyses of these experiential reports.

One quantitative analysis on these experience reports is currently being conducted (Coyle & Baggott, 2006). A team of four researchers is analyzing the reports using a statistical technique called Latent Semantic Analysis to determine relationships between words, concepts, and specific drugs. The researchers hope to delineate objective characteristics of certain substances, to quantify the meaning of an experience by the relationships of data within a report and across multiple reports. The authors state that it is too early for results, but they hope to create a map of relationships within a multidimensional space, something like a visible language that objectifies experiences.

However, it is impossible to contact the authors of these reports, so the trustworthiness of the information supplied is questionable. People may exaggerate or avoid telling the entire story, altered states are often difficult to convey in ordinary states of consciousness (Wade, 2000), and other people cannot verify these reports. Still, such reports can inform researchers with additional ways of seeing the facts regarding nonmedical DXM use. Partial and selective as they may be they are the best starting place available. The current medical literature dismisses or marginalizes the phenomenology of the nonmedical DXM user; these reports do not.

**The Transpersonal Potential of DXM**

There are many ways to define the term “transpersonal.” This article will take the view held by Dr. Stanislav Grof (1988), who wrote “The common denominator of the rich and ramified group of transpersonal phenomena is the subject’s feeling that his or her consciousness has expanded beyond the usual ego boundaries and has transcended the limitations of time and space” (p. 38). Grof not only defined the term but also developed a rich taxonomy of transpersonal experiences that he has encountered over years of research. He created his taxonomy based on three sources of experience: psychedelic research using LSD, holotropic breathwork, and through working with individuals undergoing spontaneous transpersonal episodes.
Experiences recorded in *The Vaults of Erowid* (2006b) were chosen for analysis. Readers have submitted over 50,000 reports, but less than 20% have been published (Erowid & Erowid, 2006). At least two trained volunteers graded each report for accuracy, believability, interest, and quality. The volunteers pass above-average reports on to an editor for final review before publication. This system results in high quality reports, but may also introduce bias. As drug users willing to write and submit a report of their experience are not likely to represent the general population of drug users, the experiences contained may have limited generalizability. Still, an exploratory survey was conducted on the user reports contained within *The Vaults of Erowid* (2006b).

As of May 31, 2006 *The Vaults* contained 297 reports of nonmedical DXM use. This present survey excluded all reports indicating other active ingredients (including other active ingredients in OTC preparations, such as analgesics or expectorants), leaving 140 reports for summary. Twenty-six reports mentioned 37 experiences that fit the criteria of transpersonal experiences according to Grof’s (1988) classification system. The most common categories of experience were “Psychic Phenomena Involving Transcendence of Space” (seven experiences) and “Encounters with Spirit Guides and Suprahuman Beings” (four experiences). Many experiences were clearly of a transpersonal nature but did not fit neatly into any one of Grof’s categories. A selection of DXM-facilitated transpersonal experiences from *The Vaults of Erowid* is included in the Appendix to this article. This sample is merely a proof of concept. The actual range of transpersonal experiences facilitated by DXM may be more narrow or expansive.

Perhaps the most common experience was that of death, feeling close to death, or other death-related events (blue monkey, 2001; InsanityEchoes, 2002; Piss, 2001; ronnie, 2003; SMP, 2002; Xerxes, 2002). Another common experience was the out-of-body experience (OBE), descriptions of which fit into several of Grof’s (1988) categories. Many people reported feeling somehow outside or apart from their physical bodies, yet were able to see and hear what was going on around them (Senshi, 2001; _-Seven-_ [Sigma-7], 2002; The Shadow, 2000; Xerxes, 2002). Two people reported their consciousness moving or being connected to that of a loved one several thousand miles away (Flower, 2000; J., 2000).

Psychonautical DXM users also reported encountering people or beings while exploring other worlds or spaces. One person encountered several future versions of himself, from which he received important advice about his life (Andy, 2001). Another person was visited by a deceased friend (ronnie, 2003), and several people felt they had encountered some form of God. God was described as a computer (InsanityEchoes, 2001), a crone-like female (Anonymous, 2000c), a 50-year-old man with short dark hair (Okey, 2000), a labyrinth made of stone and plants (Anonymous, 2000c), light (SMP, 2002), and a mouth made of shadows (J., 2000). Other exceptional experiences were reported, many of which can be read in the Appendix.
During 1998 a church was created for the religious use of DXM, called “The Church of Tussin” after the popular brand of cough medicine Robotussin. The stated objective of the church was

To promote the exploration of one self and of the universe with the powerful shamanic device, DXM. This is not a blasphemous satire on religion, but a secret ritual of practice that enables oneself to perceive reality in a different way, and to contact higher spiritual beings for the promotion of self exploration and development. (Terrence, 1998)

This article, from an online magazine devoted to psychonautical discussion of DXM, did not state how organized the church was, how many members it had, or even if it met regularly in the physical world or online. The point, for the current article, is that enough people felt so strongly about the spiritual impact of DXM that they formed some sort of club or church to further the above objective.

Also of note is a poll the same online magazine conducted, which reported that 68% of survey participants “claim their religious beliefs have been influenced or changed by DXM” (Gravol, 1998). There were 25 participants in the survey, which accounted for 8% of magazine subscribers. Although this is a low number and percentage of participants, it is still notable for its possible implications for spirituality and transpersonal psychology. The editor concluded, perhaps prematurely and without backing up his or her claims,

Another amazing aspect of this survey was that nearly 2/3 of all subscribers underwent a religious change after partaking in DXM. … This obviously implies that DXM does have very strong ties to the spiritual world. … And in all aspects, it would only make sense to base a religion on DXM usage for the enlightenment and self-progression of the individual self. (Gravol, 1998)

Of course, even if websites contain more information than scholarly reports, this does not ensure that the information is accurate. Internet reports do not always take into account factors such as the expectations and psychological set of the user, the environment or setting in which the user took the substance, the specific nature of the substance(s) taken, or the nature of the user’s CYP2D6 phenotypes. More research is needed before any conclusions can be drawn regarding the hypotheses set forth on these and other DXM-related Internet sites. There are more hypotheses and theories in psychonautical literature than in professional literature, which demonstrates how under-researched this area of study may be.

**OUTLINING FUTURE RESEARCH**

The first step towards researching this unique chemical is to analyze qualitatively and quantitatively the hundreds of user reports available. Attention would have to be given to type of preparation (pills, powders, or syrup) as well as quantity of the substance, mindset and intention of the user,
and the setting of substance use. Descriptive categories could then be obtained. Researchers could interview former and current users of DXM, keeping in mind the same categories just listed.

After such analyses, it may become feasible to conduct human subject experimental studies exploring the psychological effects of DXM. DXM was designed and intended to be used as a cough suppressant and nothing more. It is now being used clinically for a variety of unintended reasons, as described above. Of especial note is a study by Steinberg et al. (1996) investigating the neuroprotective effects of DXM. They administered ascending doses of oral DXM to neurosurgery patients every 6 hours for 36 hours. The highest dose administered was 9.64 mg/kg or 400 mg. They found that “high-dose orally administered [DXM] is well tolerated in neurosurgical patients. … Symptoms were reversible and disappeared once the drug was discontinued” (p. 864).

From this and several other medical studies, Steinberg et al. (1996) conclude that it is safe to administer doses of 5–9.64 mg/kg to patients. If DXM were studied clinically for its psychological effects, such a trial would most likely be conducted in a hospital with appropriate medical staff. If the protocol were to be similar to that of Steinberg et al. (including exclusion criteria, dosage regimen, and follow up procedures) it would be feasible and ethically defensible to explore ascending doses up to and including Steinberg et al.’s high dose.

None of the medical researchers mentioned in this article described significantly distressing or dangerous side effects of DXM administration. None of the authors discontinued their research, nor did they recommend to their peers stopping research on DXM for any ethical or safety related reason. Such medical use of DXM is safe, and often pleasant, for the participants: “The majority of patients felt a sense of euphoria” (Steinberg et al., 1996, p. 862). This research can continue with new goals in mind.

In preparation for experimental investigation, study designs and ethical considerations would have to be discussed in more detail. At the present, however, the hypothesis that DXM may facilitate transpersonal or psychotherapeutic experiences is tentative. Descriptive analyses of user reports must come first in order to define the area of study more precisely. In addition to the hundreds of Internet reports currently available, in-person interviews with current and former nonmedical DXM users could feasibly be conducted. A well-designed study on the psychological effects of DXM would be both exciting and informative. Once the information about DXM suggested by nonmedical users is analyzed and disseminated, a human subject research study may be properly designed.

**Conclusion**

Psychonautical DXM users have inquired into the breadth, depth, and significance of the DXM experience for many years. Laing’s (1967) words from the beginning of this article included the advice “we do not need theories so
much as the experience that is the source of the theory” (p. 3). It may also be useful to become familiar with a phrase displayed in the section of The Vaults of Erowid that is dedicated to user experience reports: “You Cannot Deny the Experiences of Others” (Erowid, 2006b). In order to do justice to DXM experiences, whatever they may be, it will be necessary to explore many topics. It is perhaps more important to explore questions than to arrive at answers.

These experiences deserve to be analyzed using radical empirical (James, 1904/1987) and phenomenological (Giorgi, 1983) methodology in order to discover why nonmedical users subject themselves to DXM ingestion and intoxication. Previous research into other transpersonal experience-inducing activities has been conducted in similar ways (Hastings, 1994; Strassman, 2001; Tart, 1971; Wade, 2000). The experiences need to be described adequately before any other research can be conducted. Afterwards they may perhaps be interpreted, and there may be room for exploratory clinical trials. Description of what is already available should perhaps come first.

DXM may be one of the few chemicals not currently under prohibition in the US that facilitates access to transpersonal experiences. Researchers have conducted clinical trials with DXM for several reasons and have described the biochemical effects of DXM rather well. Data from emergency rooms have shown the potential for physical danger when people ingest massive amounts. However, the psychological effects of DXM have been more elusive. Radical empirical and psychonautical research into DXM use would be helpful in harm reduction as well as in conducting research in experimental transpersonal psychology: being able to control and trigger transpersonal experiences in order to observe the results.

REFERENCES


Hello


Appendix

User Reports

The following reports were selected from the The Vaults of Erowid “Experience Vaults” (2006b) and have been edited for punctuation and spelling. Grof (1988) defined many more categories of transpersonal experience, but only those categories that were represented in the user reports are included here.

Experiential Extension within Consensus Reality and Space-Time

Transcendence of Spatial Boundaries

Identification with other persons. “At one point I would live a complete life or ‘life thread’ in the course of listening to one song” (Okey, 2000).

Group identification and group consciousness.
While in a different state of existence (unlike physical reality), I began to summon every person that I’ve been in contact with throughout my entire life. … I could see each and every one of them as a small glowing “orb” of light; they all looked physically identical, yet somehow I knew who each one of the orbs was. … I decided that there was no way I could directly communicate with all of them, so I decided to “emit” love and understanding to each and every person present, regardless of past disagreements or misunderstanding. A bright, golden light began pouring out of me and enveloped everyone who was present. (Thgilenin, 2001)
Identification with animals.
In the Dex [DXM] world, I saw myself as a bird. I was flying rapidly from South America to North America, seeing all of the countries as they actually were (although there were more trees present than exist in reality). I saw how my conditioned views were far different from reality. … As a bird, I was uninhibited by artificial, political boundaries (sin fronteras). I could see how powerful, and yet how arbitrary, borders were. (Trippy-Trip Corey, 2001)

Identification with plants and botanical processes. “I thought I was a flower. I could feel myself swaying the wind, I could see a big field of grass instead of my normal surroundings” (Anonymous, 2000a).

Experiences of inanimate matter and inorganic processes.
I didn’t feel my body anymore. … The ground receded and the clouds got closer. … A cloud floated around me and I kind of became the cloud. I had no sense of actual feeling, I didn’t feel like I had a body, even in the cloud. I could see in every direction at once and saw nothing but clouds and stars. For a while I just stayed there, and I wondered where the world had gone. I just felt that everything made perfect sense and was content. … I told myself that this was my place. This was where I belonged. … Then the clouds started raining. It looked beautiful, these slow graceful clouds slowly pouring tiny drops out onto this dark world. Then, somehow, I knew I myself was forming just such a drop. I had no sensation of touch or gravity or wetness, I just knew I was sliding toward the bottom of the cloud and becoming a raindrop. For a few seconds I dangled from the bottom of the cloud, swaying in a breeze that I didn’t feel or hear. Then I fell. (En San It E, 2002)

Extraterrestrial experiences. “I listened to the sun. I could see Pluto. I felt the edges of the universe. … distances became extremely comprehensible” (Flower, 2000).

Identification with the entire physical universe.
Now my being—which was really a universal “we” as opposed to an individual identity—seemed to contract into a single point then explode outward countless times, the infinity of space and time and perception and being contained within each explosion. “We” were the whole of the multidimensional universe collapsing upon itself and exploding outward over eons of unimaginable time, terrified, relentless, ecstatic. … The gist of the matter, however, was that I was both an individual and the whole of creation, both the creator and the created, and that this is true for all beings. (Anonymous, 2000c)

Psychic phenomena involving transcendence of space.
What was even more interesting were the short periods of time (felt like two minutes each) where I would float over my own body, in the top corner of the roof and watch my body stare at the wall as my friend would try to talk to me. (The Shadow, 2000)
Physical Introversion and Narrowing of Consciousness

The next thing that happened can sort of be looked at as an in-body experience rather than an out-of-body experience. I fall into my own heart and droop through it. It looks like a dark burgundy real heart shaped glob that is kind of bleeding itself (hard to put into words). Next I fall down further into my veins. I travel down my left leg and explore for a bit. All of a sudden I realize I have a body and open my eyes and I was back. (Erik, 2003)

Experiential Extension beyond Consensus Reality and Space-Time

Spiritistic and mediumistic experiences.
This was truly an out of body experience. Pure Eighth circuit consciousness. I imagined people sitting on my bed next to my body, and I had conversations with them from the other end of the room. I didn’t actually talk out loud, because vocal sounds come from the body, and I had left it behind. ... I constantly began moving in and out of my body. To me, I was dying. It was not scary, but just interesting. The conversations with nonexistent people continued. ... It was incredibly powerful. A true spiritual pilgrimage. This drug is not for the casual user, but is a tool for the shaman. (Xerxes, 2002)

Encounters with spirit guides and suprahuman beings.
He. ... said his name was Jafta and that he had lots of things to tell me. From there I can remember nothing about what he told me except that it was advice to me about my life. ... It was unbelievable! This old beggar knew everything about me, and many things I had never known consciously or admitted to myself. I am unable to remember any of the concrete details but I know that that conversation is stored in my subconscious and I have done some drastic life changing since then.

When he finally finished talking to me I asked Jafta how he knew so much about me, my thoughts, my life, everything! He gave me the most beautiful smile and said to me “I am you…” (Andy, 2001)

I had a visit from my best friend, my former trip partner, who just so happened to die a year ago. I thought that he had come for me, that I was going to join him, and God was there as well to help me transition. (ronnie, 2003)

Visits to other universes and meetings with their inhabitants.
At some point I attracted the attention of the Great Queen Mother (literally) of the entities. Words are inadequate. The Queen Mother was a wasp-like thing so immense that her body was like a pocket universe unto itself. I could never see more than a small fraction of her at a time. I journeyed inside her and communed with her for hours. We were empathically linked somehow. I realize this sounds utterly insane, and it is. We felt overwhelming affection for each other. ... I felt as if the Queen Mother were sealing me inside a waxen cell within her body. Yet I wasn’t afraid—I figured she knew best. It felt very protective in a way. (Anonymous, 2000b)
Experiences of mythological and fairy-tale sequences.
The next thing I knew I was falling down the rabbit hole like never before. …
Many times I had to fight off demons and just about every other form of negativity out there. … Finally reached the bottom and just like I had expected (and read about) there was a guide waiting for me. Once I had adjusted and realized I had really reached the spirit world, my next task seemed to be assigning a name to my guide. The first thing that popped into my head was Daemon, then I was like oh shit, some negativity must have slipped by. … That’s when a long-time spirit friend came to my aid. It was Arroron the wise and mighty dragon spirit, who was truly my guide. He quickly saved me from the perils which I had gotten myself into. Arroron showed me around and helped me take my long overdue initiation. (Saca-Mental, 2001)

Experiences of specific blissful and wrathful deities.
I was convinced that the devil himself was there in the room. I did not think “Oh I’m on drugs” or anything like that. To me, it really and truly appeared that Satan was there with me. The room seemed awash in a hellish glow, which can probably be partially attributed to my pupils dilating to the extreme. … I actually remember very little from the actual trip, I only remember the feeling that there was a tremendously evil presence there with me, and that the room was extremely hot. (Edward, 2001)

I saw God. I went into this room. I was “told” that it was his “room.” I walked around a corner in the entrance. And He was standing there. I was scared to death. … He knew that I was scared to death. He then held out his hand and shook my hand. He said “Hi, have a seat.” We sat down and had some small talk. And then I was led away. He looked slightly Jewish. More like a cross between my Father and an older Me. One thing I was made aware of. He had nothing to warn me about, nothing to scold me about, and He was glad to see me. He seemed proud of me, and he seemed very supportive. (Okey, 2000)

Experiences of universal archetypes. “I saw the formation of consciousness through pro-creation” (Flower, 2000).

I felt like my soul was trapped inside my dead body and I was looking out and I saw the paramedics come, my parents come, and a crowd of people around me and I heard the paramedics say “she isn’t going to make it” and them rush me to the hospital and I saw myself in the stretcher, hooked up to all these tubes and then the doctors say “we’re sorry but your daughter is dead” and then I saw my funeral. … So I saw my family and friends all around my grave and me in a coffin. Then I come back to being a soul in a dead body at the movies, looking out at the world as I lie here dead. Then the most unbelievable thing that has ever happened to me happened and … I swear a light shown down on me and I swear it was god (and I never believed in god until that happened) and my lifeless body came back to life and came back to reality. (SMP, 2002)

Experience of the Demiurg and of cosmic creation. “The entire universe reality was destroyed and another one took its place. I can’t even describe all that I saw. Every thing that I believed in was destroyed” (Okey, 2000).
Experience of cosmic consciousness.

Not too long after, I found myself traveling to a realm that I could sense was much “higher” in significance than any of the other places that I had visited. I ended up in the middle of an endless mass of silver/golden light—I could feel every single particle of my being disintegrating and becoming part of the light-mass; indescribable sensations bombarded every part of me—far greater than any pleasure that I’ve experienced here on Earth. (Thgilenin, 2001)

The Author

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