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Altered States During Shamanic Drumming: A Phenomenological Study

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This study investigated the experiences gained from a 20-minute shamanic-like drumming session. Twenty-two persons participated and made written descriptions afterwards about their experiences. A phenomenological analysis was applied which generated 31 categories, that were organized into six themes: 1) The undertaking of the drumming journey, 2) Perceptual phenomena: visual, auditory and somatic, 3) Encounters, 4) Active vs. Passive role, 5) Inner wisdom and guidance, and 6) Reflections on the drumming journey. A multitude of detailed experiences were described such as visual imagery, hearing sounds, encountering animals, as well as gaining insights. Participants generally appreciated the drumming session and few negative effects were noted. The conclusion made is that shamanic-like drumming can be a valuable supplement to other psychotherapeutic techniques.

The drum is an important tool in indigenous cultures for achieving shamanic visionary trance states (often described as “journeys”). Drumming can be used alone or in combination with singing or dancing. The main rhythm used in drumming for shamanic purposes is typically a steady rhythm of about 4 to 5 beats per second (Neher, 1962; Symmons & Morris, 1997). These frequencies correspond to the theta dominated activity in the brain (Neher, 1962), which also seems to facilitate visionary experiences with vivid imagery, altered states of consciousness and perhaps also experiences of paranormal occurrences (Symmons & Morris, 1997). During this journey the shaman is awake and alert, and is able to move at will between ordinary and non-ordinary reality (Maxfield, 1994). In the worldview of a shaman, the purpose of such a journey could be for example contacting the spirit world to gain information about which medical plant to be used or how to find food. This is done for an individual, a family, or a community that seeks his or her help (Metzner, 2009).

Some features of altered states of consciousness (ASCs) are perceptual changes, body image changes, disturbed time sense, alterations in cognitive functions, but also experiences best described as mystical or ineffable (cf. Kjellgren, 2003). ASCs can be induced by a variety of techniques such as sensory isolation (e.g., prayer, meditation, flotation tank), sensory overload (e.g., rhythmic drumming), physiological methods (e.g., long

distance running, hyperventilation) or by psychoactive substances (e.g., LSD, ayahuasca, MDMA).

However, different opinions on the concept “altered states of consciousness” exist, and the term is subject to several definitions. A classic definition by Tart (1972) is “a qualitative alteration in the overall pattern and mental functioning, such that the experimenter feels his consciousness is radically different from the way it functions ordinarily” (p. 1203). Another definition by Krippner (1972) is “a mental state which can be subjectively recognised by an individual (or by an objective observer of the individual) as representing a difference in psychological functioning from the individual’s “normal” alert state” (p. 1). In these definitions, ASC is described as a recognised deviation in psychological functioning compared to the ordinary baseline “normal” state. Rock and Krippner (2007) have pointed out a possible confusion in the discussion of altered states of consciousness, where *consciousness* per se is confused with *the content of consciousness*. They emphasize that the term “altered pattern of phenomenological properties” should be used instead of ASC, to minimize this confusion. This is an important distinction, which needs to be discussed further. Also, whether or not shamanic journeying states are really altered states is, in fact, a contentious issue in the literature (see, e.g., Krippner, 2002). For the present study, we are using the term ASC as a way of describing subjective alterations in psychological functions, as compared to the experienced normal state.

In a historical perspective ASC might be considered “the world’s oldest healing method” (cf. Eliade, 1972). Ancient cultures and native shamanistic societies have used consciousness altering techniques for the purpose of healing and wellbeing for persons suffering from diverse ailments. Several scientific studies indicate positive and healing effects for methods known to induce ASCs, such as meditation (cf. Kjellgren & Taylor, 2008), sensory isolation in flotation tanks (Bood et al., 2006; Kjellgren, Sundequist, Norlander, & Archer, 2001), yoga (Kjellgren, Bood, Axelsson, Norlander, & Saatcioglu, 2007) and psychedelic drugs in a spiritual or clinical setting (Johansen & Krebs, 2009; Kjellgren, Eriksson, & Norlander, 2009; McKenna, 2004; Morris, 2008).

Drumming as a method for achieving ASCs or spiritual experiences also became popular in the New Age or neo-shamanic movement in the Western world (Bittman et al., 2001; Lindquist, 1997). The book, *The Way of the Shaman*, by Michael Harner (1990) has likely been one of the factors contributing to this interest. Since the participants in the present study were not shamans, we have used the term “shamanic-like drumming” instead of “shamanic drumming,” as suggested by Rock, Abbot, Childargushi, and Kiehne (2008):

Techniques may be conceptualized as “shamanic-like” insofar as they bear some relation to shamanic techniques and yet depart from what may properly be called shamanism. For example, listening to monotonous drumming to facilitate soul flight on behalf of one’s community may be considered a shamanic technique, while recreationally listening to monotonous drumming to facilitate purported shifts in consciousness is merely “shamanic-like.” (p. 80)

It was early pointed out by Walsh (1989) that scientific research on drumming was rather neglected and that such studies were needed. Since then several studies have been performed, evaluating the phenomenological effects and different aspects of monotonous drumming such as change in mood and visual imagery, as well as comparisons with other induction techniques or instructions (Rock, 2006; Rock, Abbott, Childargushi, & Kiehne, 2008; Rock, Abbott, & Kambouropoulos; 2008; Rock, Baynes, & Casey, 2005; Rock, Casey, & Baynes, 2006; Rock, Wilson, Johnson, & Levesque,

2008; Woodside, Kumar, & Pekala, 1997). In the study by Rock (2006) a thorough analysis of phenomenological contents during rhythmic drumming (as well as for other induction techniques and control condition) was performed. As an extra manipulation control, this study investigated the effects of a “shamanic journeying instruction” (as proposed by Harner, 1990) about how to perform the journey and also if an additional religious information affected the outcome. Another aim with this study was also to explore the origin of the mental imagery. Several themes emerged in the phenomenological analysis of participants’ experiences such as predatory creatures, whirlpools, helping spirits, obstacles, and religious mental imagery. Shamanic journeying instruction coupled with religious instruction were associated with the highest religious imagery, and it was concluded that most of the visual images were primarily from autobiographical memories.

All techniques involving ASCs (both non-drug as well as drug induced) are heavily influenced by a person’s set (expectancies) and the setting (environment and circumstances) where the technique or method is performed (Gustafson, 1991). We are interested in analyzing the psychological experiences obtained during shamanic-like monotonous drumming and how such experiences are interpreted. Since we realized that the set and setting are of great importance we deliberately chose participants with an interest in transpersonal psychology in the hope that their ability and enthusiasm to engage in a task like this are superior to persons without these interests. We also expect this sampling to generate rich and elaborated descriptions.

Method

The aim of the present study was to make a phenomenological analysis of the experiences gained from a “shamanic-like drumming journey” in a group of Swedish students of transpersonal psychology. Our research questions were: a) What kind of experiences/themes might emerge? b) Do participants experience some kind of healing or beneficial effects of the drumming journey?, and c) Are there any occurrences of concurrent negative or disturbing experiences?

Participants

A total of 22 persons (3 males, 19 females), mean age 48.45 years (SD = 12.62), participated in a shamanic-like journeying drumming session. All participants were students in a course on transpersonal psychology at Karlstad University, Sweden. They had

on average participated in similar drumming session 2.68 times before ($SD = 3.75$, range 0 – 15 times). For six of the participants it was the first time.

Design

A shamanic-like drumming session was performed (rhythmic live drumming) in a dimly-lit room for 20 minutes. All participants were lying down on mattresses on the floor. Instructions on how to perform this imaginary journey were given before the drumming started. Afterwards data was collected using written reports.

Data collection

Data was collected on participants' estimation of the time duration of the session, the subjective experience of the process, and the degree to which the phenomenology of the event deviated from normal.

Duration estimation. Immediately after the drumming stopped, participants were asked to write down their estimation of the duration (in minutes) of the drumming journey. The actual length (20 minutes) was not known to the participants. They were not informed beforehand that they were going to be asked this question.

Drumming experiences. A questionnaire with three questions was constructed for use in this study. The questions were: 1) *Please describe your experiences during the drumming*, 2) *Was the drumming a positive or a negative event? Please describe*, and finally 3) *Were there any experiences during the drumming that you believe can have any importance for your everyday life?* The questionnaire also included questions about age, gender, and number of earlier experiences with drumming journeys. Each participant filled in this in silence after the drumming journey was completed. The questionnaires were already distributed (upside down) before the drumming began, in order to minimize distraction and movement in the room. There was no time limit for filling in this questionnaire. The data gathered here was used for the phenomenological analysis.

Degree of experienced deviation from normal state. As a supplement to the phenomenological research, a set of quantitative data were also gathered using the EDN (Experienced Deviation from Normal state) questionnaire. This questionnaire consists of 29 statements (items), each responded to on a VAS-scale 0-100 mm (endpoints 0 = No, not more than usually; 100 = Yes, much more than usually). Here are some examples of the items: *I saw scenes rolling by like in a film; I could*

hear sounds without knowing where they came from; Perception of time and space was like in a dream. All the points obtained from these 29 items were averaged to provide an "index of experience" (0 – 100). These values reflect the total experience of deviation from normal states. The scale reliability measurement Cronbach's alpha for EDN was 0.94 in the present study. The EDN scale has been used in several earlier studies (e.g., Bood et al., 2006; Kjellgren et al., 2007; Kjellgren & Taylor, 2008; Kjellgren, Lindahl, & Norlander, 2009-2010; Kjellgren & Buhrkall, 2010) with Cronbach's alpha ranging between 0.91 – 0.97, which indicates very high reliability for this scale. The validity of the scale has been confirmed in studies where comparisons between treatments such as relaxation in a flotation tank or yoga with control conditions (relaxation in armchair and/or resting on a bed) have been done (Kjellgren, Sundequist, Sundholm, Norlander, & Archer, 2004; Kjellgren et al., 2007). The EDN-scale has generated consistent measurement across different conditions.

The EDN tests have been extensively used in connection with flotation-tank research (e.g., Kjellgren et al., 2001; Kjellgren, 2003). Typical EDN values after an individual's first experience of sensory isolation in a flotation-tank are about 30 EDN points and about 40 points on subsequent occasions. By comparison, the experience of resting on a bed in a dark, quiet room scores 15 EDN points (Kjellgren et al., 2004). There was no time limit for response to this questionnaire. When the questionnaire was completed participants tiptoed out of the room in order to minimize disturbance and interactions.

Procedure

Before the drumming started all participants were informed that their participation was voluntary and were assured of total confidentiality. They were also informed that all the data reporting was to be done independently. The participants were all gathered in a room with mattresses on the floor. Before the drumming began, all were instructed to perform a "Lower world journey" as described by Harner (1990). The instruction involved visualizing (closed eyes) a hole in the ground as an entrance for the journey, then going through a tunnel, and finally trying to find what was at the end of this tunnel. They were instructed to search for an answer or solution to a personally pre-formulated question or problem area. They were also instructed to visualize going the same way back to ordinary reality

when the drumming journey ended (indicated by a notable different drumming rhythm). All participants laid down on the mattresses, the lights were turned off, curtains were drawn to produce semi-darkness, and then the live drumming (about 4 beat per second) was performed by the first author. Twenty minutes later the drumming was terminated by four sharp beats repeated three times; thereafter the drum was beaten very rapidly for 30 seconds. The light was then turned on. The first author then asked the participants to write down their estimation of the duration of the journey and then to fill in the questionnaires. When all completed questionnaires had been handed in, participants were invited to gather again in order to talk freely and share their experiences. They were all thanked for their participation.

Analysis

The participants' written descriptions were transferred to a Word file. Then, the Empirical Phenomenological Psychological Method (EPP-method) devised by Gunnar Karlsson (1995) was used in analyzing the data. The EPP-method comprises an analysis in five steps and was performed by the first and second author.

Step 1. This stage involved reading participants' descriptions carefully until a substantial understanding, overview, and "sense" of the material was obtained. The aim of this reading was to distinguish relevant psychological phenomena. In this study, the descriptions were read three times in no particular order. The reading excluded the aim of testing validity or any specific hypothesis.

Step 2. In the second step of the analysis, the text was divided into smaller so-called meaning units (MUs). This division is not based upon any rules of grammar, but entirely upon the content the researcher discovers and at places where a suitable shift in meaning occurs. Here is a short example yielding two different MUs: "1/ *It felt dreamlike, exciting, and primitive*" but "2/ *afterwards I was not able to remember everything that happened.*" A total of 542 MUs were identified in the written descriptions.

Step 3. During the third step, each MU was transformed from the language of the participant to the language of the researcher. This was the first abstraction of the material. This transformation follows no specific rules; however, everyday language is preferred to "psychological" terminology. The purpose is to make the implicit and underlying meaning of a phenomenon visible and explicit. Two examples of transformed MUs (from

the examples above): 1) The participant described feelings of an unusual state, and 2) The participant described amnesia for some of the drumming experiences. All 542 MUs were transformed, so 542 transformed MUs were transferred to step 4.

Step 4. In the fourth step, the 542 transformed MUs were synthesized into categories. An attempt to describe and answer the question "how" the phenomenon expresses itself (noesis) and "what" the phenomenon is (noema), were focused on in the categorization. The categories vary in content depending upon the phenomenon from which they originate. The categories or situated structures were developed during processing whereby repeated consultations of raw data continued in a hermeneutic manner. This was the second abstraction of the material. A total of 31 different categories emerged. Three examples of categories that emerged were: visual imagery, loss of memories, and encounters with animals. All 542 MUs were used when these categories were constructed.

Step 5. In this final step, the categories were moved into more general themes or typological structures. This is the third and last abstraction of the material. The level of abstraction was decided according to the principle that clarity should be attained without excessive detail. The purpose was to reflect at a more abstract level. The themes included categories that denoted various aspects of the experience of participating in the shamanic-like drumming: for example the theme "Encounters" was composed by the following five categories: *Encounters with animals*, *Encounters with plants*, *Encounters with insects*, *Encounters with humans*, and *Landscapes*.

Reliability and validity

A trustworthiness test, the Norlander Credibility Test (NCT), was used for the phenomenological analysis (Edebol, Bood, & Norlander, 2008; Norlander, Gård, Lindholm, & Archer, 2003; Pramling, Norlander, & Archer, 2003) in order to ensure reliability. It was conducted by random selection of five of the 31 categories. Four of the transformed MUs were then randomly selected from each of these five categories. The material was given to two independent assessors. Their assignment was to put the twenty MUs into the five different categories. One of the tests yielded an 84 % agreement, and the other test yielded an 80% agreement. The overall agreement was thus 82%. According to Karlsson (1995), high validity is ensured by following the stages of the EPP method.

Results

The Empirical Phenomenological Psychological method (EPP; Karlsson, 1995) was used to analyze the material. The analysis yielded 542 MUs from which 31 categories emerged. Each category illustrated a special perspective on the phenomena studied and, when considered as a whole, the categories can illuminate and provide insight into experiences and meanings derived from the drumming experience. The categories are presented below (Table 1) in the approximate sequence in which they emerged in the analysis. Each of the 31 categories provides interesting information, and even more so if they are interrelated in a general structure. In the last step of the analysis, the categories were further abstracted and combined into six themes and will be further discussed as such. The six themes are:

1. The undertaking of the drumming journey (categories: 1, 2, 3, 4, 5, 6, and 27)
2. Perceptual phenomena: visual, auditory and somatic (categories: 8, 9, 11, and 13)
3. Encounters (categories: 14, 16, 18, 20, and 22)
4. Active vs. Passive role (categories: 7, 10, 12, and 17)
5. Inner wisdom and guidance (categories: 19, 21, 25, and 26)
6. Reflections on the drumming journey (categories: 15, 23, 24, 28, 29, 30, and 31)

Supplementary quantitative data

Degree of experienced deviation from normal state (EDN). The mean value derived from the group was 34.88 (SD = 18.34, range 0.52-66.20).

Time perception. Participants estimated the duration of the drumming journey in average as 15.5 minutes (SD = 5.40, range 6 – 30 min). The actual time was 20 minutes.

Discussion

The aim of the present study was to make a phenomenological analysis of the experiences gained from a shamanic-like drumming journey. A multitude of detailed and elaborated experiences were described by the participants, including rich visual imagery, hearing inner sounds, and gaining psychological insights. The participants liked the drumming journey and stated that it was a valuable and interesting method. Very few negative experiences were documented. In the light of both the written reports and the quantitative measuring, it seems reasonable to conclude that the participants

No.	Category (Meaning Units [MUs])
1	The setting (10 MUs)
2	Aim (12 MUs)
3	Entry hole (17 MUs)
4	The tunnel (32 MUs)
5	Influence of the drumming sound (13 MUs)
6	Movements in different levels (8 MUs)
7	Alterations initiated by the free will of the participants (8 MUs)
8	Bodily sensations during the drumming journey (8 MUs)
9	Visual imagery (8 MUs)
10	Experiences of being active with their bodies (17 MUs)
11	Events are passively experienced or seen (33 MUs)
12	Sudden transformations (10 MUs)
13	Inner sounds (8 MUs)
14	Encounters with animals (32 MUs)
15	Reflections about power-animals (12 MUs)
16	Encounters with insects (5 MUs)
17	To be an animal (10 MUs)
18	Encounters with plants (17 MUs)
19	Emergence of memories (12 MUs)
20	Encounters with humans (13 MUs)
21	Emotions during the drumming journey (25 MUs)
22	Landscapes (29 MUs)
23	Problems during the drumming journey (36 MUs)
24	Loss of memory (7 MUs)
25	Processing of personal issues (26 MUs)
26	Insights (33 MUs)
27	Return to everyday consciousness (10 MUs)
28	Feelings after the drumming journey (7 MUs)
29	Descriptions about performance of the drumming journey (22 MUs)
30	Comparison with other similar experiences (35 MUs)
31	Evaluation of the drumming journey as a method (27 MUs)

Table 1. Results of Analysis of Phenomenological Categories

were induced into a mild altered state of consciousness by the drumming, since their experiences to a great extent seemed to differ from their normal state of being.

The six themes are discussed below. A few illustrative citations from participants are presented (in italics).

The undertaking of the drumming journey

This first theme refers to the descriptions given about the experiences of participating in the drumming journey concerning preparation and “technical details” (e.g., the drum, entry hole, the tunnel) during the drumming (categories: 1, 2, 3, 4, 5, 6, 27). All participants formulated an aim to themselves before the drumming journey started. Common aims were questions about health issues and personal relations. They pointed out that they felt secure and comfortable in the group, and that this factor was of great importance. When the drumming began, participants visualized some kind of entrance into the ground (*a well; tree-root; pond*) as a starting point for the inner journey. After the entrance they visualized/experienced passing through a tunnel. Many different descriptions of what it looked like were given (*smooth; straight; dark; narrow*) and the passage through it were experienced in different ways such as walking, flying, or crawling. For some it was easy, others found it harder. Sooner or later all participants found an exit from the tunnel and experienced entering into an inner landscape (lower world). In this inner landscape (many detailed descriptions of what it looked like were given) participants experienced moving through different levels of worlds or realms. In the worldview of indigenous shamanistic cultures the concept of multiple levels of reality is central (Metzner, 2009). Participants also appreciated the rhythm of the drum and experienced the sound as a healing source. They pointed out that the drumming was felt as physical sensations in their bodies and how these sensations facilitated the feeling of actually undertaking the journeying. The drum was also central in signalling the re-entry into normal reality; a task the participants experienced as easy.

Perceptual phenomena: visual, auditory, and somatic

The second theme summarizes different experiences of perceptual changes (categories: 8, 9, 11, 13) that occurred during the drumming, phenomena usually described as characteristics of altered state of consciousness. The most common perceptual alterations described were lively visual imagery. Encountering sceneries such as kaleidoscope patterns, spirals, or different colors

were common, but also descriptions of more detailed sceneries involving gardens, animals, humans, plants or mushrooms. All things perceived were organic forms like landscapes or living beings; nobody reported having seen technological or man-made products or forms. Several acoustic impressions were noted such as hearing flutes, running water, songs or even *the song of the mountain or of the earth*. An altered perception of the body was pointed out, and described as either an increased sensitivity to normal bodily functions (*could hear my heartbeats; I felt my aorta*) or as physical alterations of functions (*tears were running from my eyes; my body changed form; I felt light as a feather*).

The participants reported on how the lucidity and clearness of these experiences fluctuated during the course of the drumming journey. The sensation was described as fluctuating between a dreamlike irrational and a clear focused state, maybe indicative of moving in and out of an ASC. The perceptual alterations that occurred might suggest that an ASC was achieved during the journey. The supplementary quantitative measure (EDN-scale) with a mean value of $M = 35$ strengthens the assumption that an unusual non-ordinary mental state was achieved, approximately equivalent to 45 minutes of sensory isolation in a flotation tank (Kjellgren et al., 2004). Another measure aimed at documenting possible occurrence of ASC was the time-estimation measure. Participants in general underestimated the duration (about 25%) of the journey. Disturbed time perception is one of the hallmarks of ASCs.

Apparently the intensity of the drumming state could vary from a very mild experienced deviation from normal state, such as meditative daydreaming with just some perceptual alterations, to more powerful experiences where convincingly detailed scenes pass by similar to the experience being immersed in a film. The state induced during the drumming includes several of the important characteristics of ASCs. Despite the discussion in literature regarding the question whether shamanic-like drumming induces an ASC or not (cf. Krippner, 2002), we would like to suggest that the state during the monotonous drumming is best described as an ASC.

Encounters

This theme comprises different kinds of encounters (categories: 14, 16, 18, 20, 22) experienced during the drumming journey. Close encounters with landscapes and natural sceneries were commonly described.

Sometimes the landscape was perceived from a bird's eye view, but mostly from the perspective of walking around in it. In these inner landscapes different kinds of beings were encountered, such as humans, animals, plants, and mushrooms. The humans encountered often seemed to be of native ancestry or from the past, generating an exotic impression (*the man with the leopard fur talked to me, advised against going down the slope; the native American presented some twigs to me*). Several different animals were seen, ranging from amphibians, reptiles, insects, birds, and mammals. These meetings often had a stark emotional charge (*when I met the brown eagle, waves of excitement flew through my body; The elephant and I put our foreheads together and it warmed my heart, the moment was full of grace*) and were regarded as precious moments. Participants wondered whether such highly emotional moments might be an indication of a meeting with their "power animal," as described in shamanic traditions. It might be speculated whether the characters or attributes of the encountered animals in some way could be recognized as symbolic metaphors for hitherto unknown or unconscious dimensions of participants' own mode of being or acting. The encounters with plants were described as highly rewarding; old trees with flowers or fruits were common features. The experience of meeting insects, which was less common, was described as generating feelings of discomfort, and was regarded as a kind of intrusion.

Active vs. Passive Role

This theme describes participants' experience of taking an active or a passive role during the journey (categories: 7, 10, 12, 17). Participants reported that they were able to make conscious choices during the journey, such as to change or move into a specific direction, to create things needed, or to intervene when they sensed that their help was needed. They mostly experienced having a physical body and were able to voluntarily talk, swim, and walk or do some other activity. But sometimes things changed without their conscious intent; a sudden unexpected movement might occur or they felt thrown into a totally different scenery and course of events. The environment would quickly change from familiar into unfamiliar sceneries during the journey; sometimes this transit was instantaneous. Even their own bodies were suddenly transformed into something else (*my mouth was changed into a beak, and my hands were transformed into claws*). There were many descriptions given of being transformed into animals, mostly referred to as

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becoming a bird and being able to fly or get a bird's eye view (*it was a fantastic feeling being a flying sharp-eyed hawk*). Such events are common shamanic features. If these experiences occurred because the participants were acquainted with or interested in shamanism could not be ascertained.

Inner wisdom and guidance

The fifth theme deals with issues that are best categorized as psychotherapeutic processes (categories: 19, 21, 25, 26). Participants gained insights into specific problem areas or issues in their lives. Thought processes involving personal problem-solving were initiated, mainly involving three areas: relations, physical health and psychological health. The insights that arose were experienced as coming from an inner source of wisdom, the emergence of which were said to be facilitated by the drumming. Several persons reported how memories from their childhood emerged which were considered important and of great significance. Needs for working/dealing with these memories were expressed. Sometimes such processes or their hidden meaning were revealed later during the journey. The experiences as such were seen as defining metaphors of their lives (*I could see how I tried to harvest the crop before it was ripe, that's exactly how I live my usual life*). Many different emotions were experienced, mostly as peaceful or harmonious, involving some solution to a problem or life situation (*a fantastic euphoric feeling when the eggs hatched, this reassured me everything is going to be fine; I realized I can re-create this feeling of peace and harmony in my daily life*). Sometimes the solutions appeared as indirect metaphors, but also as direct recommendations. The most prominent feature of the insights concerned the importance of taking responsibility for their own lives and not await for others to help them. The experiences of such deep and valuable insights suggest that the method could serve as a valuable complement to other psychotherapeutic interventions. A therapeutic session subsequent to the drumming journey (as part of a therapeutic treatment programme), would probably have yielded more benefits.

Reflections on the drumming journey

The last theme summarizes descriptions about participants' reflections on the drumming journey and sense of awe (categories: 15, 23, 24, 28, 29, 30, 31). Reflecting on what was happening while the drumming journey was still going on was regarded as a disturbing problem since it restrained the possibilities of relaxing and going deeper into the experience (*I lost focus when I tried to analyze what was happening*). Some participants

reported having problems finding a suitable starting place (entry hole) or to be able to move forward at all; these problems were encountered during the first minutes but all of them finally managed to perform the session.

In general, reflections in retrospect arose regarding the validity and relevance of the experience and its possible applications. Many wondered if the encountered animals constituted a “real power animal” or not, or if such exists, and if there was a hidden possible meaning. The drumming session was considered a pleasant method for achieving stress reduction and relaxation. A few stated that they had problems recalling or recapitulating the content of the session. Others reflected on the strange or exotic feeling when the body was experienced as still remaining on the floor but the mind wandered and took part in an alternative reality or process independent of the body. Finally, some effects of the drumming session reported were positive feelings of rest and relaxation and that it was an interesting and worthwhile experience (*I felt very alert afterwards; I had never done this before but it felt good and was very interesting*). It is interesting that the participants reported feeling relaxed despite all the emotional and intense experiences. This might be an indication of the healing and beneficial potential of temporarily entering a state of mind quite different from the daily normal. Some persons also reflected upon the fact that there were some similarities but also differences between the drumming state and other techniques (e.g., dreams, earlier psychedelic experiences, hypnosis, and flotation tank).

Suggestions for future research

Many psychologically interesting experiences during a shamanic-like drumming session were documented in the present study. Healing and beneficial effects were reported by the participants. Very few negative experiences were encountered. This might be one of the reasons—along with motivations such as pure curiosity or an urge for spiritual exploration—why the technique of shamanic-like drumming has gained popularity in the Western world in recent years.

The conclusion is that shamanic-like drumming as a technique can be an interesting and fruitful domain for future research. Its value as a supplement to other psychotherapeutic techniques needs to be investigated and further evaluated, and to establish, for instance, whether there are also negative effects if the method is applied to unprepared or psychologically vulnerable individuals. As far as we know, there have been no studies

to date investigating possible risks or adverse effects. Also many different physiological studies, investigating changes in factors such as EEG-patterns or hormonal- or immunological functioning could be performed.

Possible methodological limitations of the present study

Since it is well known that set and setting heavily influence the experiences during a consciousness-altering technique, it can be argued that the experience of seeing tunnels, meeting animals, and other shamanic elements might simply be the result of instructions given or the expectations of the participants and not by the drumming per se. An experimental study by Rock et. al (2006) suggested that many experiences during shamanic-like journeying involve recall of autobiographical memories.

The experiences recounted in the present study were considered real and genuine by the participants and in a phenomenological study the inner life world is of particular interest. The intention of this study was not specifically to prove any particular effects induced by shamanic-like drumming (such a claim would require several randomized controlled trials) but to increase the body of knowledge about what might happen during monotonous drumming. A study with other types of drumming, other instructions or other participants, could have yielded very different results. Also, the validity and reliability of a phenomenological analysis can always be questioned. In the present study the NCT with two independent assessors were used (see Method section) in order to increase reliability, and strict adherence to the stages of an EPP-analysis (Karlsson, 1995) ensures high validity.

Final remarks

In a speculative sense, it may be argued that the drumming journey can be seen as a metaphor for a person's life. Birth happens through the birth canal (symbolized as the tunnel), and one enters into a still unknown world (as in the drumming journey) where many things happen to us as humans. Some of these “just happen,” others are under our control (theme: active vs. passive role), we encounter and interact with other beings (theme: encounters) and we learn and evolve during our lifetime (theme: inner wisdom and guidance). The theme “reflections on the drumming journey” is analogous to our reflections on our own life. The beat of the heart make our lives possible, just as the rhythmic pulse of the drum sustains a journey through an alternative perception of life.

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