being autside the dominion of time

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s explained in previous contributions to the MAPS Bulletin (Shanon, 1997a, 1998a and 2000a; see also Shanon, 1997b, 1998b and 2000b), for almost a decade now I have been engaged in the systematic phenomenological investigation of the special psychological state induced by the Amazonian psychotropic brew Ayahuasca (for

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general background information, readers are referred to the previous publications cited above). My investigation is based, on the one hand, on extensive firsthand experiences with the brew (at this point, I have partaken of it more than 130 times) and, on the other hand, on interviews conducted with almost 200 individuals. Amongst my informants were indigenous and non-indigenous persons from various places in Brazil and Peru as well as foreigners (that is, persons residing outside of South America). These individuals differed in the levels of their experience with Ayahuasca and with respect to the contexts in which they partook of the brew. My investigation examines all aspects of the Ayahuasca experience - general atmosphere and feelings, hallucinations in all perceptual modalities, ideations, spiritual and mystical experiences, modifications in people's overall state of consciousness, transformations of personal identity as well as non-ordinary overt behaviors and performances. A full report of the investigation is presented in a forthcoming book titled The Antipodes of the Mind: Charting the Phenomenology of the Ayahuasca Experience. In this short communication I discuss one aspect of the Ayahuasca phenomenology that has to do with radical modifications in the experience of temporality.

The study of temporality is of special significance because, as noted by many thinkers—philosophers and psychologists alike (see Kant, 1781/1953; James, 1890/1950; Bergson, 1944, 1950; Heidegger, 1962; and Merleau-Ponty, 1962; as well as

Shanon, 1993 and Shanon, 1998), temporality is perhaps the most fundamental constituent of human cognition. Thus, any modification in temporality is of significant cognitive import, empirical as well as theoretical. Various such modifications are encountered with Ayahuasca. Like other psychotropic agents (for reports related to other such agents, see Mayhew, 1961; Watts, 1962), Ayahuasca can induce marked changes in the experience of time. Here I would like to consider those changes that are so radical as to induce a feeling that is altogether outside the dominion of time; for further details and a more extensive theoretical discussion, the reader is referred to Shanon (2001).

Changes in the rate of time's flow

Perhaps the most marked, and the most common, modification in the temporal experience encountered with Ayahuasca has to do with changes in the rate of time's flow. Specifically, time may be experienced to run faster or slower than it normally does. The prevalent experience is that in what objectively (that is, as measured by the clock) is a short period of time, much can be experienced. The contrast is especially appreciated when drinkers of Ayahuasca consult the watch and discover that even though so much has happened to them experientially, in reality very little time has passed. What we have here may be conceived of in terms of two frames of reference. In the ordinary frame of time hardly any time

were in the ordinary frame of reference, the Israelites were in a non-ordinary one. When only a moment passed in the ordinary frame (and hence, it seemed that the sun did not move), an extended duration was experienced in the non-ordinary frame, thus enabling the Israelites sufficient time to fight their enemies. The similarity between this account and the phenomenon encountered with Ayahuasca is striking. I shall further note that the Maharal's proposal probably presents the first employment of the conceptual distinctions which, at the beginning of the 20th century, became the core of Einstein's special theory of relativity.

Interestingly, similar observations are found in the fantasy tales of C.S. Lewis in his *The Lion, the Witch and the Wardrobe* (Lewis, 1950) in which he recounts the

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has passed, whereas in the other, non-ordinary frame one seems to have traversed a very long duration. In other words, it is as if in brief moments a person can accommodate what are experienced as long stretches of time. In general, it seems to me that the more powerful the Ayahuasca inebriation is, the more pronounced is the discrepancy between the two frames of temporality. Theoretically, in the limit, experiences of timelessness associated with unbounded duration may be experienced. In this sense, the Ayahuasca drinker will find him/herself to be, in effect, outside of the dominion of time.

The state of affairs noted here is, I think, exactly that recounted in the Bible in conjunction with the war the Israelites had with the Amorites (Joshua 10: 12-13):

Then spake Joshua to the Lord in the day when the Lord delivered up the Amorites before the children of Israel, and he said in the sight of Israel, Sun, stand thou still upon Gibeon; and thou, Moon, in the valley of Ajalon. And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies.

Impressively, the Maharal of Prague, the Jewish rabbinical sage of the 16th century famous for his Golem, explained this event by means of the coupling of two distinct frames of references. Specifically, the Maharal (see Mallin, 1979) proposes that whereas the Amorites

adventures of children who passed through a wardrobe and entered into magical lands. The children's adventures in these other lands lasted hours, days, perhaps even longer; yet, as far as the ordinary world was concerned hardly any time elapsed at all. Thus, when the children returned to the wardrobe and into their house, they realized that the adult members of their family thought that they were absent for only a moment or two.

The meeting of two frames of reference

Another non-ordinary pattern involving the contrast between two frames of time has to do with non-ordinary anchoring of temporal reference. Normally, we are situated in the present: The past is gone, not to be retrieved, the future is not yet and still unknown and we, human beings, are confined to the now. This holds both the definition of our own being and that of whatever we perceive. Thus, if now—Tuesday, 13:15—I am in my home in Jerusalem, what I perceive through the open window is taking place now—that is, Tuesday, 13:15 as well. This seems to be trivial, but with Ayahuasca people may encounter patterns that violate this scheme. It is quite common for drinkers of the brew to feel that they are here, in the now, observing states of affairs happening in other places, at other times. For instance, once I found myself looking through the hut in which an Ayahuasca session was held and saw a scenario which I interpreted as taking place in ancient Egypt.

Even more powerful are cases in which Ayahuasca drinkers feel that into the scenes of their visions. In

such cases, drinkers feel not only that they have seen or witnessed scenarios taking place in other times, but that they have actually been present in such scenarios. Experiences of this kind involve both non-ordinary space-travel and what may be regarded as time-travel. In especially strong visions, drinkers may feel totally immersed in these scenarios and even act in them and engage in interaction with the objects, people and creatures that they encounter in them. Transformations of identity may be experienced as well. Since these experiences involve various facets which extend beyond the topic of temporality, I shall not discuss them any further here.

The realm of the eternal

Still more radical is the experience in which one feels that one is situated in a point of reference where one can observe everything that has ever happened as well as everything that will ever happen. This point of reference defines the eternal, with respect to which all events have an equal temporal status. In a certain sense, they are all there and one only has to look at them. From the perspective of the eternal, the temporal may, in a fashion, be reduced to the spatial. This, note, is reminiscent of the view presented by Spinoza (1670/1989, 1985) with regards to both determinism and the nature of time.

Experiences of this kind are described by Alex Polari (1984), a Brazilian intellectual who is currently a leader of the Church of Santo Daime, a syncretic religion that uses Ayahuasca (referred to as Daime) as a sacrament. The following are insights Polari gained during the course of his own firsthand experience with the brew:

The Daime, simply, delivers us to all the Times. Overcoming the difficulties of our consciousness, which still has to establish differences between what was, what is and that which will be. (p.70)

In conjunction with this, a useful analogy is to be found in Mayhew's discussion of the non-standard experience of time he had with mescaline (Mayhew, 1961):

"...mozart was said to have been able to they cross the boundary and enter grasp an entire symphony in an instant."

When we read something, we are aware of one word coming after another. But when we detach our minds from the sense of the words and look at the page as a whole, this impression fades, and we are aware that the words all exist together at the same time. (p. 298)

Knowledge and the realm of meaning

I would approach Mayhew's observations from a somewhat different perspective, focusing not on the written words but on the content they express. The book is there - everything described in it is in front of the reader at the same time, now. The story that the book narrates progresses in a certain sequence in time. Yet, we the readers (especially if we have already read the book or heard the narrative) can open the book and read it in any order we wish. One can start by reading an episode that took place in the middle of the sequence, then turn to an episode towards the end of the book, and later to one at the very beginning.

Related to this is the epistemic status of the knowledge readers have of the narrative recounted in the book. A book takes time to read. It is also the case that if enacted, all the episodes in it would take time. However, the information contained in the book is all there at once. And so is the knowledge readers familiar with the book have. Actually, this pattern is quite general. Think of a body of information you know well: a novel, a scientific theory, a piece of music. I ask you to think what it means, to appreciate what it conveys, to assess your understanding of it. How much time did it take you to do so? A few moments, I presume. At any rate, much less than the time it would actually take to read the novel, to retrace the theory, to listen to the musical piece. One's appreciation is, in a way, instantaneous. And the more knowledgeable or competent one is, the stronger the effect. For example, Mozart was said to have been able to grasp an entire symphony in an instant (Ghiselin, 1952). But in truth, all of us know this feeling: When one knows something well, the grasping of this knowledge (as distinct from specific demonstrations of it) seems to require little or almost no time.

Taking a more general perspective still, we note that, by its very essence, semantics transcends time. We can all appreciate this when reading literary texts of past generations, inspecting old photographs, or looking at works of art from ancient civilizations. The child or the young enamored couples that appear in them are long, long dead. Yet for the reader or the viewer the persons in question are forever children, adolescents or young adults. Babyhood, adolescence and adulthood are not just moments in biographical chronology, they are also chapters in a story. It is the story of human life, that which we all enact in the course of our own individual lives. The particular manifestations of this story evolve in time, but the basic patterns of the script transcend the contingencies of the temporal. These pertain to the domain of eternal meanings.

With Ayahuasca, similar appreciations are gained on a much larger time scale - that of human history.

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There are periods of peace and periods of war, times of success and times of failure. Kings reign and exercise great power but eventually they die. Likewise, entire civilizations rise and fall. In grand Ayahuasca visions one may be privy to a special perspective, by which one observes such historical events with the detachment of distance (which does not mean lack of empathy). With this, one savors a little bit of the taste of the eternal and appreciates the perennial meanings of life and Existence. As the Biblical sage Ecclesiastes (Kohelet in Hebrew) said "There is nothing new under the sun." (1:9) In line with all this is another insight reported by Polari (1984):

I understood that this truth is absolutely immune to any historicity.... A truth that is not relative nor relativized by anything, which entered and syntonized within a dimension of eternal permanency.... Above and beyond a finite consciousness depending on matter and ending with it. (p. 61)

In the European civilization, the locus classicus for linking atemporality and semantics is Plato. According to Plato, meanings and regularities in the world are due to the Ideas. The Ideas are abstract entities that embody all true knowledge - everything that is not affected by time

and change. Thus, the realm of the Ideas both specifies meaning and transcends time. Several informants with academic education explicitly told me that with Ayahuasca they felt they contemplated the "Platonic spheres". Observations along similar lines were also made by Huxley (1971) in conjunction with his experiences with mescaline.

Interestingly, the association between atemporality and meaning is also encountered in Amerindian mythologies. Overing (1985a, 1985b) reports that in the cosmology of the Piaroa, a tribe from the Orinoco basin of Venezuela, in the world of the Gods' relationships between beings is defined in a manner that defies ordinary logical and temporal relationships. Overing explains this by noting that in this world relationships pertain to the world of meaning. Analyzing the cosmology and

metaphysics of the Piaroa, Overing also noted that the world of the shaman, and that of the Gods, is outside of time. Indeed, instead of being defined by linear temporal contiguity, this world is defined by relation-

ships of meaning. Overing (1985a) further reports that according to the Piaroa there is a realm which is before time in which the special powers of the Gods are guarded in boxes of crystal. Inter alia, these powers include rationality and the words of songs. It shall be noted that the knowledge pertaining to this realm is directly associated with plant-induced hallucinatory experiences (in this case, however, not Ayahuasca).

Nirvana-like experiences

Usually, the experience of eternity associated with Ayahuasca does not entail the abolition of movement. Phenomenologically, time ceases to be relevant, but motion, progression and change remain. Specifically, the scenes one observes from the perspective of the eternal do manifest motion, progression and change. Much rarer with Ayahuasca is the experience of cessation, in which atemporality is coupled with stillness. In this case, people do not feel that other realms are revealed to them. As pointed out by mystics in many traditions (for pertinent information and discussion, see Forman 1990, 1998), being in this state, one feels immersed in the very ground of all Being. There, neither language nor reflection apply, and hence no semantics.

Concluding remarks

Our survey presented various states of mind experienced as being outside of the dominion of time. The very encounter of such states counters the general statement with which this paper opened, namely, that human psychology is grounded in time. This also contrasts with my own basic view of cognition. Indeed, for me, the discovery of the atemporal was intellectually most unsettling. Throughout my professional career as a cognitive psychologist and a philosopher of psychology, I have come to maintain that human cognition is embedded in time and that all cognitive performance is achieved through action temporally unfolding in the real world. This, I have argued (see Shanon, 1993), is not merely a technical constraint but rather it is an essential, most fundamental, feature of human cognition. Theoretically, one could perhaps envision intelligent systems that operate in a different fashion, but these would be radically different from the human one. Ayahuasca revealed a totally different picture to me: It presented me with a cognitive mode which, in a fashion, defines a world outside time. The question as to how to reconcile these new discoveries with my general view of cognition perplexed me quite a bit.

Full discussion of this question is outside the scope of this paper. Here, let me confine myself to a brief summary statement.

It could be suggested that human beings have the ability to operate, and exist, in two different states. Metaphorically, these may be conceived in terms of the shifting of gears. The first state is the ordinary one, and it is fully grounded in time. The other, non-ordinary state consists of the freeing of the mind from the ordinary temporal constraints. That such freeing is possible is a major feat of the human psyche. The study of the dynamics of the shift between the two states is, I think, a cognitive-psychological topic of great interest. A theoretical framework that shall account for it will encompass both ordinary consciousness and non-ordinary consciousness and view them as specific cases obtained by

consciousness and view them as specific cases obtained by means of variations in a common, general structure. Thus, the enterprise in question is, in essence, the development of what may be regarded as a general theory of consciousness.

Theoretically, the main moral of the present discussion is the linking of atemporality and semantics: The realm of atemporality is the realm of meaning. In essence, the underlying principle governing the experiences of

atemporality is the following: The more meaningful something is to us, the less bound by time it becomes. It seems to me that in one way or another, all of us are familiar with this pattern. One does not have to be in non-ordinary states of consciousness in order to appreciate this, but, obviously, in such states—as with Ayahuasca—the effects are by far more radical and their impact much more striking.

Finally, let me underline the fact that in this discussion, I have not alluded to any considerations of paranormality. In this, I radically differ from many, perhaps most, of experienced Ayahuasca drinkers. In the various contexts of Ayahuasca use phenomena like those cited here are usually conceived either in terms of time travel (it is said that Ayahuasca allows one to actually go to the past or even the future) or in terms of visits to other nonphysical worlds. Thus, in both the indigenous Amerindian context and in the modern syncretic religious sects employing Ayahuasca, the brew is said to bring its drinkers to other, separate realities. In the doctrines of all the modern Brazilian religious sects that use Ayahuasca as a sacrament these are referred to as "the astral"; often, the notion of reincarnation is invoked as well. I have had those experiences which are characterized as pertaining to the astral and I think I know what the protagonists of

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spiritualism are referring to. Yet, I do not subscribe to the parapsychological, supernaturalistic view. Instead, I would propose that what is referred to as the astral be conceived of as the realm of meaning.

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• MAPS is extremely proud to announce the publication of Sherana Harriette Frances' new book, Drawing It Out: Befriending the Unconscious (A Contemporary Woman's Psychedelic Journey), with introduction by Stanislav Grof, MD, and Prologue/Epilogue by Tanya Wilkinson, PhD.

The incredibly powerful drawings in this book reveal the inner workings of Ms. Frances' psyche after undergoing LSD psychotherapy in the early 60s. Sherana's works have been used in countless training sessions and seminars since then by Stanislav Grof and others and have been exhibited internationally. They are now available with a complete narration by the artist. Cost \$19.95. Advance orders taken: orders@maps.org

• Congratulations to Jon Frederick, moderator of the MAPS Forum, who has completed his dissertation and passed his oral exam. His dissertation, "EEG Coherence and Amplitude Effects of Rhythmic Auditory and Visual Stimulation with an emphasis in Computational Methods," can be browsed (in Adobe Acrobat format) at: http:// web.utk.edu/~smiile/diss/frederick-diss.pdf

Jon has moved to Houston, Texas, where he will be working as a post-doctoral fellow in the center for computational Biomedicine, University of Texas-Houston Health Sciences Center. Jon has agreed to continue to work as the Editor of the MAPS Forum, a position he has held for the past four years.

- MAPS donated \$1,000 toward the cost of creating the book *Ibogaine: Proceedings of the First International Conference* (KR Alper and SD Glick, Eds., Academic Press, San Diego, California 2001). Information about the book can be accessed at: http://www1.fatbrain.com/asp/bookinfo/bookinfo.asp?theisbn=0120532069&vm=m
- A scientific paper about ketamine by **Dr. Evgeny Krupitsky**, **Dr. John Krystal**, **et. al.**, has been published in the on-line edition of *Neuropsychopharmacology* and will also appear soon in the print version. The article is entitled: "Attenuation of Ketamine Effects by Nimodipine Pretreatment in Recovering Ethanol Dependent Men: Psychopharmacologic Implications of the Interaction of NMDA and L-Type Calcium Channel Antagonists" and can be found at: http://www.acnp.org/citations/Npp080701161