Short Communication

A CASE STUDY OF SPACE-TIME DISTORTION DURING A TOTAL LUNAR ECLIPSE FOLLOWING STREET USE OF LSD†

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Abstract—Although psychedelics can induce "cosmic" consciousness through severe distortions of time and space perceptions, little attention has been given to examination of this psychopharmacological property. With the hope of providing an impetus to further research in this area, a case of cosmic perception under the influence of LSD is reported which included the apparent movement of consciousness to the lunar surface combined with the experience of remote viewing of the Milky Way galaxy. While the possibility of veridical remote viewing is unlikely, it is speculated that the neurocognitive action of LSD can sensitize the user to focused bright light, associated memories, and creative elaborations during actual eclipse events. Experimenters are urged to adopt precautions to avoid potentially detrimental effects of pharmacologically manipulating the space-time continuum.

Keywords—case study, lunar eclipse, LSD, photosensitization, remote viewing, space-time perception

Since Plato's proposal that "the Sun, the Moon, and five other stars, which bear the appellation of 'planets,' came into existence for the determining and preserving of the numbers of Time" (see Plato 2001), the human experience of time in connection with the planets has undergone much speculation and research. The moon has long been acknowledged as a biological time-giver (or *zeitgeber*). Beyond folklore and speculation surrounding an increase in "lunacy" around the time of the full moon (Rotton & Kelly 1985), the lunar cycle rules the tides and is often identified as being synchronized with the human female menstrual rhythm, which is critical for species survival (Coveney & Highfield 1990).

In 1779, Mesmer proposed that he had discovered the "property of the human body which renders it susceptible to the influence of heavenly bodies" (Binet & Féré 1891). Mesmer suggested this property was like light and analogous to the action "at a distance" of an ordinary magnet. He therefore called it "animal magnetism" (Binet & Féré 1891). Contemporary thinking goes a bit farther. According to Einstein's general relativity, the extremely large mass of planets and the sun actually curve space and time. In Einstein's thinking, gravity does not even exist, with objects simply "rolling" into the nearest space-time "well" (Penrose 1994; Coveney & Highfield 1990).

Chronic exposure to a geomagnetic field or space-time curvature could reasonably be expected to manifest experiences of curvatures or distortions of space and time in most individuals as a matter of course. However, most persons find their perceptions of space and time unremarkable. We all experience the regular flux of day and night, lunar phases, and the seasonal cycle repeating itself annually. In the absence of psychopathology or anomalous experience, this is the normal state of affairs.

Even so, there is putative evidence that astronomical events do have effects on the timing of events which normally occur below the level of awareness. For example, the timing of birth might be influenced by the planets. This speculation extends back to Gauquelin's (1955) book reporting statistically significant correlations between the positions of the planets (Mars, Jupiter and Saturn) at birth and people's career choices. A subsequent study showed a significant association between planetary position at the birth-times of famous French people and their later extroversion or introversion scores (Gauquelin, Gauquelin & Eysenck 1979), an effect which was replicated in 500 successful Americans (Gauquelin, Gauquelin & Eysenck 1981). More recently, Persinger and Hodge (1999) have shown a gender difference in the timing of birth as a function of changes in global geomagnetic activity, which are associated with sun-spots and electrical storms.

Likewise, there appears to be a significant impact of lunar and tidal phases and the geomagnetic field on payout rate in gambling casinos (Radin & Rebman 1998). Further, geomagnetic fluctuations have influenced hit-rate in telepathy (Radin, McAlpine & Cunningham 1998). In addition, a series of studies has found significant but varied effects of geomagnetic fluctuations on the frequency of war

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(Persinger 1999), the accuracy of telepathic dreams (Krippner & Persinger 1998; Persinger & Krippner 1993), sudden infant death syndrome (O'Connor & Persinger 1997), out-of-body experiences (Persinger 1995), and psi experiences concerning death and crisis (Persinger 1993). It should be noted that the timing of these associations is quite precise, with significant correlations coinciding with changes in the geomagnetic field either on or within a few days of the phenomenon being studied.

The reader should be cautioned that these studies are correlational, and causation cannot be inferred from association. However, the literature on geomagnetism suggests that electromagnetic phenomena affecting the planet might also have effects on human consciousness. With direct relevance to psychoactive drugs, Persinger (1998) has recently reported a case study on visual effects of rotating regular horseshoe magnets following LSD ingestion. In a similar vein, the case study reported here might stimulate consideration of using pharmacologic means to study experimentally the interactions of human time perception with geomagnetic and astronomical phenomena. From these studies, then, statements about causation could be made.

However, this task is anything but simple. Common sense tells us the flow of time is an integral part of the space-time continuum in which we experience our lives. But renowned physicist Roger Penrose (1994: 384) has recently suggested that " 'time' is merely a particular choice of coordinate in the description of the location of a space-time event. . . . It is *only* the phenomenon of consciousness that requires us to think in terms of a 'flowing' time at all."

Let us look, then, at what psychology has to say about time perception. Most research examines time from a linear or Newtonian standpoint, both measuring and interpreting time as a one-directional flow from past through present to future, moving with a uniform rate. Some psychological studies of time perception, however, have suggested the existence of bidirectional time (Dawson 1992a, b). That is, psychological time appears to have two directions: one is accounted for by memory, which "looks" backward into the past; the other is explained by expectation, which sets goals for the future. As there is no reason to think that the processes of memory and expectation are not carried on simultaneously, the functions of memory and expectation might easily become confused, for example, after consumption of a psychoactive drug. Without a well-ordered perception of time which distinguishes memory from expectation—past experience from future plans—the differences among childhood experiences, recent events, and future goals would fade. The perceived context for action could even disappear, and events ordinarily perceived to take days, hours, or months would seem to occur within seconds. It follows that experiences which identify a disruption or distortion of the perception of time would have a powerful impact on the individual, as well as an interest for researchers and clinicians.

Psychedelic drugs are known to produce such experiences (Tart 1983; Fischer 1975; Grof 1972; Ornstein 1972). Indeed, the psychedelic experience evoked by lysergic acid diethylamide (LSD) alters the perception of time and space so radically that it has been termed "cosmic" (e.g., Smith & Tart 1998; Leary 1982; Grof 1972). For example, Ornstein (1972: 89) points out that the nonlinear time which characterizes the extraplanetary or cosmic perception after ingestion of psychedelic drugs may be a one-way journey warranting clinical attention:

> Very often this experience cannot be placed in linear coordinates, for it is outside this mode of operation, outside words, outside normal time. The best the verbal-logical mode can do to account for the experiences is to term them "timeless" . . . which allow "an infinite present" to exist. These experiences, for many, represent the first significant break from a normal linear consciousness, normal reality, and normal time. For some, the break into a new area of experience is unsupported by the remainder of their lives and their training, and they may not be able to return to normal consciousness.

As Grof (1972:67) suggests in his encyclopedic summarization of over 3000 psychedelic sessions, "the subject experiences phenomena related to celestial bodies other than our planet, existing within our solar system or outside of it. A special type of experience belonging to this category is the consciousness of interstellar space reported independently by several of our subjects." Thus, the case study reported here is not an isolated incident, although a comparison with a large set of archived cases would be helpful. Instead, it is consistent with the capacity of LSD intoxication to produce an enhanced awareness of outer space in some subjects. It is not unreasonable to suppose, then, that one of the properties of LSD is to sensitize the brain to temporally circumscribed and predictable astronomical phenomena such as an eclipse. Therefore, this case study provides an example of extreme distortion of space-time perception under the influence of LSD during a total lunar eclipse.

CASE STUDY: PREVIOUS THERAPY

After 17 years absence from therapy for mild depression, a former client (L.S.) reentered counseling. At this time, he repeated a description (initially provided during the first course of therapy) of a unique experience of a total lunar eclipse shortly after consuming LSD. Although I had initially considered reporting this case almost two decades ago, it did not seem warranted. The experience claimed was certainly an interesting one but it differed little from many other LSD experiences already documented (e.g., Grof 1972). Also, consistent with the literature at the time implicating the LSD experience as a model of psychosis (Vardy & Kay 1983), the experience could easily have been explained by the transient hallucinatory state

induced by the drug, or more seriously, it could have been a clue to delusional thinking.

Since then, however, despite the unsupervised nature of his experience, L.S. has shown no evidence of dropping out of his social responsibilities. In fact, new research indicates the utility of the LSD experience for modeling psychosis is limited to the acute phase only, rather than to schizophrenia as a nosological entity (Gouzoulis-Mayfrank et al. 1998). If L.S. suffered acute psychosis at the time, it dissipated during the ensuing years. Clinical considerations aside, the experience reported is interesting in terms of the significance of LSD to the perception of cosmic phenomena and can offer insight into the place of human consciousness in the cosmos.

CASE STUDY: REPORTED EXPERIENCE

L.S., a 22-year-old single white male had been undergoing counseling for mild depression for several months when he disclosed that he had consumed "blotter acid" obtained from a friend and spent about 30 minutes walking with two friends (and a portable tape-deck playing rock music) to a location where he observed the total lunar eclipse (visible on the west coast of North America at 2:00 a.m. on December 30, 1982). During the first session following his return to therapy 17 years later, the client repeated his previous report of the lunar eclipse experience. A comparison with his earlier report indicated no significant change in its essential elements. This is his description of the experience:

> Looking up, we tracked the movement of the planet's shadow on its massive satellite. Then it was upon us. The left edge of the moon had already darkened with the Earth's edge forming an arc bordering sun-light and Earth-shadow on the lunar surface. Gradually, Earth approached near-exact alignment between sun and moon. The light portion of the moon brightened as the sunlit moon-sliver shrank due to the encroaching shadow of Earth. . . . As the eclipse became total, with the sun behind us as we viewed the moon in front of us, only a point of light remained on the moon. Completely without warning, the bright rays of light from this point seemed to attach to my head, lift it off my shoulders, and physically move it (virtually instantaneously) to the edge of the moon where I was given a clear view of the entire Milky Way extending outward from my head! It seemed to flow through my head at the level of my eyes.
>
> I do not really know that this was the Milky Way I was seeing. I had an intense feeling of recognition that I assume was based on the many photographs and planetarium shows I had seen depicting the thin, ovoid shape of our home galaxy.
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> Upon reflection, the experience of having my head taken from my shoulders was, to say the least, completely unexpected, extremely surprising, and quite frightening. At the time, I felt compelled to exert my will to "come back to Earth" to check that my body and those of my friends were still intact and not suddenly headless. Once back with my friends, I looked, and everything was fine. We grinned and commented to each other about the spectacular experience. Then, the intensity of the last remaining point of light on the moon seemed to take over again and hurtle my eyes back to the moon.
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> During this instant, I thought I saw a shooting star skim along the opposite edge of the galaxy coincident with my eyes moving in that direction. This was most startling and brought to mind the interesting notion that my physical actions might determine motions of celestial objects or—as more popularly believed—vice-versa. The oscillation of my vision along a beam of coronal light between the Earth and the moon (replete with a new and concrete vision of the Milky Way) seemed to happen at least three or four times before the eclipse was over.

Seventeen years later, L.S. reports feelings of euphoria and periods of intensified creativity associated with reflections on this experience. These feelings are mixed with resentment at a social structure he identifies as "inconsiderate of altered consciousness as a guide to self-development." In the intervening years, L.S. reports having more often used methods other than drugs to achieve nonordinary states of consciousness while still retaining the Maslowian aim of self-realization and personal enlightenment.

CONCLUSIONS

The fact that most people do not experience lunar eclipses in the way described by L.S. suggests that the photosensitive binding of LSD to brain membranes (Walker, McNal, & Mansour 1983; Mahon & Hartig 1982) and its well-known effect on the neurotransmitter serotonin (e.g., Delgado & Moreno 1998) may have triggered the experience. Consistent with this explanation, there is evidence of altered response of the brain to light pulses following pharmacologic stimulation (Kikuchi et al. 1999). It is reasonable to speculate, therefore, that specific neuronal receptors were stimulated by LSD in response to the bright light pulse observed toward the end of the eclipse. According to the neurocognitive interpretation, the psychedelic experience reported can be explained by the brain's supersensitive response to light pulses combined with the activation of pathways subserving memories representing astronomical phenomena. Through its sensitivity to light, this drug may have hyperstimulated visual pathways of the brain and their associated and recalled visual representations of lunar eclipse events seen previously. Indeed, the client himself speculates the involvement of his "intense feeling of recognition."

This is more than an interesting case study. So far as I know, there is no other report in the literature delving into the sensitization of cosmic perceptions invoked by LSD ingestion during an actual astronomical event. Comparison with other cases would be useful and it is a purpose of this article to facilitate collaboration in such a comparative study.

Due to the hallucinogenic effects of the drug, it can be argued that there is nothing unusual about a person who has ingested LSD having the impression of moving to and from the moon, or for that matter, from the floor to the ceiling and back again. Two criteria would make the experience anomalous: experiencing "moon travel" from a distant point without knowledge of the eclipse occurring, or obtaining information about the eclipse unknown to astronomy at the time. While neither of these criteria are strictly met in the present case, the ingestee *did* have the experience of remote viewing of the galaxy. It can be speculated, therefore, that L.S. may have discovered previously unknown information about the utility of LSD in making connections between astronomical phenomena and consciousness. As Grof (1972:51) notes, "with the eyes open, [cosmic unity] results in an experience of merging with the environment and unity with the perceived objects." In the case reported here, the eyes-open experience was associated with a perception of interstellar space becoming available to the participant. Even so, this remains only an *experience* and does not demonstrate the reality of the perceived events. Although there is scientific interest in remote viewing (e.g., Puthoff 1996), there was only one report I could find which illustrates a case of confirmed remote viewing on LSD (Lilly 1985). In any case, the experience of remotely viewing the Milky Way would be difficult to confirm. Instead, it is more likely that directing expectancy towards the unusual experience of observing an eclipse raised the chances of the emergence of some type of creative experience (Krippner 1985).

In conclusion, the possibility of veridical remote viewing is unlikely. Instead, the case may provide an instance of the neurocognitive action of LSD sensitizing the user to focused bright light, associated memories, and creative elaborations during the lunar eclipse event. Additional speculation should be tempered by caution until further research is conducted. At the very least, continuing this line of research would add to neurocognitive and psychopharmacological work on temporal information processing already being done (Rammsayer 1994). Finally, it is recommended that such research use mentally healthy experienced users of psychedelics as subjects. They are more likely to recognize and be able to manage the drug-induced risks of manipulating the perception of cosmic time and space, so that the Ornsteinian one-way trip can be successfully avoided (Gouzoulis-Mayfrank et al. 1998; Strassman 1984; Tart 1983; Ornstein 1972).

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