

Mapping the Characteristics of Out-of-Body Experiences

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ABSTRACT: It is argued that systematic research on the phenomenology of out-of-body experiences (OBEs) has been neglected. More could be done on the variety of OBE features, including incidence and description, and a consideration of changes during the same experience and between experiences. Another important line of research is the study of variables that may moderate OBE content. This includes induction factors, interrelations of different features, and psychological variables. In addition, OBE features may be studied in regard to developmental issues and their change over time. A research program based on the above considerations will be useful to: (1) The development of empirically-derived definitions of the experience; (2) The development of typologies of the experience; (3) The development and testing of theories to explain the OBE; (4) The differentiation or association of the OBE from and to other states of consciousness and experiences; and (5) Help clinicians to deal with individuals reporting OBEs.

Out-of-body experiences (OBEs), or the sensation of being located at and perceiving the environment from a position other than that of the physical body, have received much attention in recent years. Several studies have presented information about the experience's incidence and its demographic and psychological correlates (for reviews see Alvarado, 1986b; Irwin, 1985). One of the aspects investigated by those concerned with the study of OBEs is the inner characteristics of the experience. This includes such features as sensations of floating; traveling to distant places or to other "dimensions"; seeing themselves in a replica of their physical body or with no body at all; seeing the physical body, tunnels, lights, and spiritual entities; and, more rarely, obtaining information about events happening at a distance. Studies of OBE features have uncovered many other interesting characteristics too numerous to discuss here (Alvarado, 1984; Giovetti, 1983; Green, 1968; Osis, 1979; Poynton, 1975; Twemlow, Gabbard, & Jones, 1982). As Blackmore (1982) says: "A great deal can be learned about the conditions under which the experiences occurred, how long they lasted, and what they were like" (p. 45).

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However, little systematic work has been conducted about the phenomenology of the experience. This includes the study of the incidence and variety of OBE features and the study of the features as a function of such variables as cognitive and personality correlates, or induction factors. In fact, most of the recent survey work conducted about the incidence and correlates of OBEs has ignored the subjective aspects of the experience to the point that researchers have not collected descriptions of the OBEs either through requests for written descriptions or through interviews. Instead, most researchers (including the author of this paper) have correlated variables to yes and no replies to an OBE question. Lack of attention to introspective results leaves such studies open to the criticism that they may have been mixing different experiences under the label of an OBE, thus bringing into question their findings about the experience's incidence and its correlates (for a discussion along these lines see Alvarado, 1986b; Tart, 1974).

An OBE research program sensitive to the experience's phenomenological richness is essential to a more complete understanding of the OBE because it would let us see the fine-grained picture of the experience that is lost in more general studies. This more sensitive approach would allow us to construct and test theories of OBEs, such as Irwin's (1985) synesthetic theory. It would also eventually lead us to understand better both the constancy and dissimilarities of OBEs between and within individuals. Such an understanding would lead to a development of empirical taxonomies and typologies of the OBE, and it would either support the notion of an experiential continuum regarding the OBE and other analogous phenomena (at least phenomenologically, if not in terms of causal mechanisms) or else show clear distinctions between them.

Such an approach has been frequently used and valued in many fields. For example, discussions of typology in the medical literature have emphasized the usefulness of identifying an experience's essential characteristics in terms of understanding the etiology and treatment of a variety of medical conditions (Hoehne, 1980). Many of the distinctions some clinicians say exist between multiple personality disorder and schizophrenia are based on the identification and clustering of particular case characteristics (e.g., Ross, Heber, Norton, & Anderson, 1989). Other studies important for the issue of differential diagnosis have focused on the features of hallucinations (Lowe, 1973).

Examples of attention to introspection and to the phenomenology of human experience can also be found in studies of meditation (Forte, Brown, & Dysart, 1987-1988), such hypnotic phenomena as time distortion (Bowers, 1979), and in work conducted with a variety of states of consciousness such as the psychotic experience (Bowers & Freedman, 1966), psychedelic experiences (Masters & Houston, 1966/1973), hypnotic and hypnopompic states (1987), and dreaming (Resnick, Stickgold, Rittenhouse, & Hobson, 1994). Ronald Pekala (1991) recently published a book-length defense of this approach that includes the results of several years of research

into the experiential aspects of a variety of states of consciousness. Pekala has charted different states using scales designed to measure a variety of dimensions such as positive and negative affect and vividness of visual imagery, among others. All these studies have provided useful information necessary to our understanding of the variety of features of states of consciousness and to the development of theoretical models to account for them.

In what follows I will review some of the work conducted along these lines with OBEs and will suggest some areas in need of further research. I will also consider aspects of this work conducted with near-death experiences (NDEs). This experience may include the sense of being out-of-the-body, but it is not defined by this feature alone (Blackmore, 1993).

THE VARIETY OF OBE FEATURES

A perusal of the works of authors such as Crookall (1961, 1964b), Green (1968), and Muldoon and Carrington (1951) clearly shows the wide range of features that form the OBE. But regardless of this and of later work (e.g., Alvarado, 1984; Giovetti, 1983; Osis, 1979; Twemlow, Gabbard, & Jones, 1982) it is clear that basic research in this area is just beginning.

Incidence and Description

We need more information about the incidence of specific characteristics of the experience. I have argued before that part of the problem in the evaluation of the literature on the subject is the lack of comparable questions across studies (Alvarado, 1986b). This issue is important in discussions of the supposed invariance of OBE and NDE features across cultures (e.g., Crookall, 1968a; Groth-Mamath, 1994). Evidence of this constancy is assumed too often without the necessary detailed comparable studies. Some preliminary studies of NDE features across cultures suggest that specific aspects of the experience may be culture-dependent (e.g., Pasricha & Stevenson, 1986).

We also need to start tapping into generally ignored OBE features rather than focusing on such usual ones as seeing the physical body. There have been some studies in which detailed questionnaires asked for a great number of features of the experience (Giovetti, 1983; Green, 1968; Osis, 1979). But overall, modern OBE researchers have shown a fairly limited interest in the big picture of OBE phenomenology.

We may follow Tiberi (1993) in his study of various emotions during OBEs such as serenity and fear. Experiencers usually report a variety of feelings during the OBE. In the words of one of them: "I WAS joy!" (Crookall, 1972, p. 81). Others commented that their surroundings were of a "fairy like quality" (Crookall, 1972, p. 74) and: "Everything appears normal, but extraordinarily real" (Giovetti, 1983, p. 79, my translation).

Some OBEs include feelings of ineffability and at oneness common in mystical experiences, a topic discussed by Crookall (1969). In one of Crookall's cases the experimenter said: "I felt strangely linked with all the people in the world as if their thought-consciousness belonged to me also" (Crookall, 1964b, p. 2). In one case I collected the experient wrote: "I felt merged with the space and air around me . . . I saw myself as one with energy, matter, the universe." Most studies of OBE phenomenology have ignored such powerful experiences within the OBE.

Many of the ignored features are the more exotic ones. Crookall discussed some of them in descriptive studies that touched on the experience of encountering entities that are helpful in different ways (Crookall, 1964a); on observations of both the physical body and an OB body from a third point in space (Crookall, 1970); and on reports of the so-called astral cord (Crookall, 1972, pp. 113-128). The latter refers to descriptions of a cord or rope-like structure occasionally reported to connect the physical body to the OB body.

Other reported features that deserve further study include visits to other "dimensions," such as White's (1996) "outer space" exceptional experiences, and, of particular interest to parapsychologists, claims of ESP and of being seen as an apparition during the experience. The latter should not be limited to the OBE apparitions of presumably "regular" people sometimes reported in the psychical research literature (e.g., Hart, 1954). We also need to pay attention to the more dramatic apparitions reported by gifted "billocators" such as the French Mother Yvonne-Aimée (Laurentin & Mahéo, 1990) and the Italian Natuzza Evolo (Marinelli, 1978).

Published case collections (e.g., Crookall, 1961; Muldoon & Carrington, 1951) and occult and mystically oriented attempts to classify OBEs in various ways (e.g., Vieira, 1986; Whiteman, 1986) are a source of ideas regarding the range of claimed OBE features deserving further exploration. Unfortunately, these writings and the specific claims found in them have been ignored by most contemporary researchers on the subject.

The Changing Content of OBEs

We must also study the way in which the same features change or vary during the same experience and between the experiences of the same and of different individuals. What shapes do tunnels take? What scenes are reported in descriptions of other dimensions? Much can be said about panoramic memory (forward or backward images?), cords (shape and points of connection between physical and parasomatic body), and perceptual distortions (mistakes, 360 degree vision). Some studies have found that in addition to reports of OBEs in which the experients see or feel themselves to be in a replica of the physical body or in no body at all, there are reports of other indeterminate forms such as balls of light or energy patterns (Rogo, 1976a). In the words of an experimenter: "I may feel myself to be a ball of light floating in space or simply a point of awareness that either focuses upon a particular area or merges, to varying degrees,

with the surrounding environment" (Harary, 1978, p. 261). Six studies with these reports have a range of 13%-47% of incidence and a mean percentage of 29 (Alvarado, 1986b).

There are also changes in the "environment" contacted. According to Crookall (1965), "Helen Brooks passed through a plane in which everything was in semi-darkness before entering the astral world proper. When the 'double' of Frank Hives first left his body, he passed through 'a thick gray mist' before entering a 'bright light'" (p. 46). Other reports start with descriptions of normal environments that change later during the experience into "other world" imagery such as heavenly and garden-like surroundings.

Another feature deserving further study is the location of consciousness during the experience. Some OBEs are not as discrete in regard to a clear-cut separation of consciousness from the body or a specific location as some investigators would like us to believe. One experimenter wrote that consciousness "switched back and forth between my physical body and another position a few yards away" (Green, 1968, p. 41). Another experimenter from my case collection emphasized "the fact of having complete physical sensation in both bodies simultaneously." This "duality" of consciousness has been described by other experients, some of whom are able to talk through their physical body while finding an aspect of themselves out-of-the-body (e.g., Turvey, 1911). Among my cases I have statements such as: "The experience is one of remaining in full contact with my physical body while having my awareness far outside of my body." Other experients in my case collection refer to sensations that range from the affective to the kinesthetic: "The feeling of 'belonging' there as a place of orientation"; "Like some of my consciousness extended to my body"; "The feeling was like being a kite tethered to the body below. There was a magnetic force field of sorts, not visible, but it could be felt." "I was aware of still being attached to the lower part of my physical body." Although the sense of separation is basic to our definition of the OBE, this continuum of descriptions of the relationship between the OB consciousness and the physical body cautions us against adopting simple definitions of OBEs in terms of the discreteness or degree of separation. It points instead to the need for further research into the continuum model and a more sensitive typology of the OBE.

In addition, the issue of location of consciousness has been discussed in terms of multiple locations. In the words of a frequent experimenter: "There are times when I am intensely aware of being at more than one location, in more than one form, simultaneously within a given experience" (Harary, 1978, p. 261). Natuzza Evolo has spoken about visits to distant places: "I saw two places at the same time, apart from the place of the physical body" (Marinelli, 1978, p. 53). A recent correspondent with a long history of spontaneous and induced OBEs wrote to me about a multiple body experience. In her words, on one occasion while she was trying to see a place at a distance she found herself to be in seven bodies swimming in a lake:

I was conscious in all 7 bodies and yet there was also an overall consciousness awareness. Sometimes, the point of consciousness was more focused in the lead body. . . . Each one was a replica of my physical body and swam

in the water as a physical body would do. . . . As the first body came ashore . . . there was an increasingly greater share of consciousness in the body on shore. For example, the second body to unite with the first was two-sevenths or something like that, and when the third body merged, it went up to three-sevenths. The merging was gradual and seemed very natural.

The changing content of the OBE may also be studied by way of the not too frequent instances in which it is claimed that veridical information is acquired during the experience. Although much has been written about this (for a review see Alvarado, 1983), there is still room for further systematic work to classify the forms in which the experience is reported to occur. From my reading of the literature (e.g., Crookall, 1961, 1964b), it seems that most cases are of the type where the experiencers travel to some place where they claim they acquire information. A smaller number of cases, however, refer to other ways of obtaining information, such as learning of someone's death by "encountering" their "spirit" during the OBE. Other cases suggest the possibility that claims to obtain information about the physical world during an OBE may take forms such as impressions or insights, or seeing through walls and other matter, although many of these do not seem to be veridical. Clearly, we need more systematic examinations of this issue based on the careful analysis of case reports.

MODERATING VARIABLES OF THE CONTENT OF OBEs

The variety of and change in OBE features needs to be studied not only in relation to incidence or description, but also in relation to interactions with other variables. The basic question here is: Is the content of the experience moderated by other variables? Figure 1 presents a view of factors that could be studied as potentially moderating variables of OBE content. But it should be kept in mind that many of these factors may be conceptualized not only as factors influencing OBE content but also as variables that are affected by the experience and its features. The latter may be the case with beliefs, as OBE content may be a function of previous expectations and life experiences, but the experience of particular features may generate belief as well. For example, encountering other dimensions or spiritual entities could foster belief in these topics and a desire to continue having experiences with such transcendental components, which in turn may themselves shape features of future OBEs.

Factors Surrounding the Occurrence of OBEs

An interesting example of research along these lines is concerned with the factors or circumstances leading up to or surrounding the production of an OBE. For example, Robert Crookall (1961, 1964b) compared the characteristics of OBEs that occurred in natural (gradual, slow) versus enforced (sudden, abrupt) contexts. He claimed that natural OBEs were more positively perceived by the experiencers and had a higher frequency of

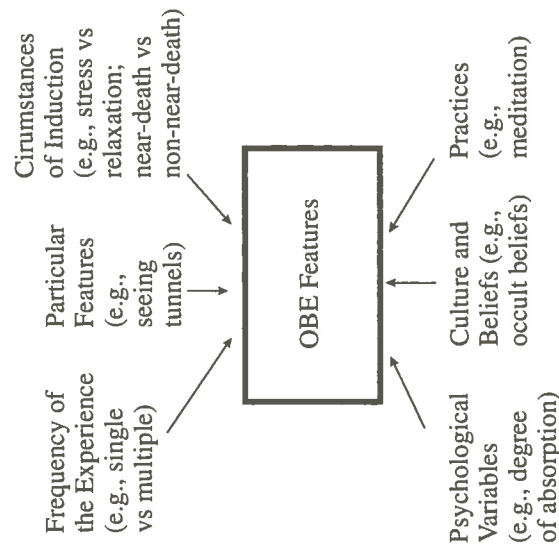


Fig. 1. Possible moderating variables of OBE features.

characteristics such as sensations of separation and return to the body (blackouts of consciousness), seeing cords and/or entities, and experiencing ostensible veridical perceptions than enforced OBEs. Unfortunately, Crookall's classifications are problematic in the sense of being poorly defined, some have little empirical support (Irwin, 1985), and independent reanalyses of his data and replication attempts have failed to confirm the validity of most of his claims (Alvarado, 1981, 1984).

Other analyses related to the circumstance in which the experience occurred were reported by Ring (1980, pp. 113-116), who found that NDEs occurring after suicide attempts did not reach the last two stages of the experience (seeing the light and entering the light) when compared to experiences that occurred during illness and accidents.

Other possibilities for research include contrasts of voluntarily induced vs. spontaneous OBEs, and relaxed vs. stressful contexts, and comparisons of the features of OBEs occurring in different states of consciousness and in different levels of physical activity (e.g., those in which the physical body is active during the OBE in contrast to those in which the body is still). Regarding states of consciousness, we may test for Bozzano's (1937) statement that in OBEs arising when the experiencers are going to sleep or waking up "the sense of doubling is vague, indefinite, fleeting" (p. 41, my translation). Presumably, Bozzano made this comment based on his reading of spontaneous OBE cases. I reanalyzed previously collected cases (Alvarado, 1984) for which each of seven characteristics were either present or absent. The median number of characteristics present per case was

one, both for the group who had their OBEs "just before going to sleep and waking up" ($N = 9$) and for the group with OBEs arising from other conditions ($N = 22$), indicating that these groups are not notably different in regard to number of characteristics. To the extent that a low number of OBE characteristics reflects vagueness or fleetingness of the experience, my analyses do not support Bozzano's observation.

Sabom (1982) compared NDEs grouped according to different medical crises, and surgical (with anaesthesia) versus nonsurgical cases (no anaesthesia), but he did not find any significant difference.

Little has been done to replicate findings such as those of Gabbard, Twemlow, and Jones (1981). Their comparison of features of near-death versus non-near-death OBEs revealed that the first group reported a higher incidence of noises at the beginning of the experience, of passing through a tunnel, of seeing the physical body, of being aware of the presence of deceased persons and other beings, and of seeing a brilliant light. In later research, Tiberi (1993), who does not refer to the previous paper in his report, found that the near-death condition was associated with reports of different worlds, new colors, feelings of serenity, tranquility, and peace and relaxation, among other features. I have conducted some comparisons relevant to this issue in which I predicted that there would be a higher frequency of features in OBEs occurring in near-death circumstances as compared to those occurring in non-near-death circumstances. I compared the features of an unpublished analysis of some of Crookall's cases to the near-death cases of Sabom (1982). Out of five comparisons, four (80%) were significantly different and favored the near-death OBEs (see Table 1). Crookall's cases were used for an unpublished analysis and were selected on the basis that they did not involve drugs and they were not death related. The cases are not only low in number but they may not be representative of OBEs in general as they were selected from those in which the

experimenter was engaged in such normal activities as reading and relaxing at the point of onset. Nonetheless, the significant results all favor the superiority of the near-death condition in producing a higher frequency of reports of particular features of the experience. Three of the findings replicate those of Gabbard, Twemlow, and Jones (1981): Like these researchers, my analyses found a higher frequency of reports of tunnels, entities, and lights in OBEs occurring during presumed near-death conditions as compared to OBEs reported to occur during non-near-death conditions.

Results such as these may be relevant to assessing the influence of expectations of dying or of physiological factors on the phenomenology of the experiences. Consequently, the usefulness of this approach is not limited to descriptive patterns, but it may be used to develop and assess explanatory models of the experience (for a discussion of this in the context of the NDE, see Blackmore, 1993).

Interrelationship of OBE Features

A particularly unexplored area is the relationship of OBE features to one another. Do some features depend on other features to manifest during the experience? One possible approach would be to map possible clusters of features that appear together or seem related to one another in some way. Greyson's (1983, 1985) NDE work provides many ideas that may be followed, such as using intercorrelations and cluster analysis techniques. Similarly, we may follow the example set by students of absorption (Tellegen & Atkinson, 1974), depersonalization (Noyes, Hoenk, Kuperman, & Slymen, 1977), and dissociation experiences (Ray, June, Turaj, & Lundy, 1992) and attempt to factor analyze OBE features. This approach could be particularly useful in the development of more sophisticated OBE scales and typologies of the experience. Such studies have great potential but should be done with caution in that we may limit unnecessarily the phenomenological richness of the experience by defining it or by limiting our studies to a scale cut off point that reflects only statistical tendencies. But used cautiously, this approach could help to identify dimensions of the OBE that may increase our knowledge of the variety of the experience and provide opportunities to test predictions based on wider theoretical models of altered states of consciousness, among other perspectives.

Crookall (1968a) argued that "several experiences that were described as having occurred in the release of these 'doubles' were also described as having occurred on their re-entry into the body" (p. 65). Irwin (1985, p. 85) did not find any relationship between the presence of onset and terminal sensations. However, in a reanalysis of my OBE data (Alvarado, 1994), I found that out of 20 individuals aware of separation sensations, 75% also reported awareness of return sensations, whereas 25% did not. In an additional analysis, I focused on an OBE feature emphasized by Crookall (1964b), a horizontal position of the OB body over the physical body at

Table 1
COMPARISON OF FEATURES OF EXPERIENCES IN NEAR-DEATH
VS. NON NEAR-DEATH CONDITIONS

Features	Near-death (Sabom, 1982) $N = 71$	Non Near Death (Crookall, 1961, 1964b) $N = 31$	Fisher's Exact ($1 pt$)	Phi Estimated
	Tunnel or similar structure	24%	0%	.001
Spiritual entities	49%	23%	.01	.23
Panoramic memory	6%	0%	.23	.07
Veridical observations*	46%	13%	.001	.31
Lights	25%	7%	.02	.20

* The veridical observations in Sabom's cases refer to events occurring close to the physical body, while those in Crookall's cases refer to events far away from the body.

the beginning and at the end of the experience. Out of 17 OBEs that started horizontally over the physical body, 76% also had the same feature before return, whereas 24% did not. These analyses are based on only a few OBE cases, but they are suggestive of interrelationships between related OBE features that deserve to be explored further.

Others in the literature have made claims deserving replication. Among these are several of Muldoon's observations, such as lack of movement coordination and the occurrence of dual vision when the experimenter is projected close to the body (Muldoon & Carrington, 1929, pp. 77, 106), and that the place where the cord is attached depends on the position of the physical and the OB body. When the physical body faces upward, Muldoon argued, and the OB body emerges in a horizontal upwards position, the cord comes out of the physical body from the front of the head and attaches to the back of the head of the OB body. But if the physical body faces down with a subsequent OB body facing downwards, the cord will come from the back of the head of the physical body to the back of the head of the OB body (Muldoon & Carrington, 1929, p. 139). Do other experiencers who report cords make similar observations?

One may also compare the characteristics of OBEs classified by presence or absence of a particular feature. According to Irwin (1985, p. 90), the experience of seeing the physical body is not related to other features of the OBE. Other analyses may focus on such features as tunnels, traveling to distant locations, and positive affect.

Sabom's (1982) study of NDEs suggests the existence of different types of OBEs according to presence and absence of seeing veridical events close to the body (e.g., details of resuscitation attempts). I reanalyzed his cases along these lines. Regarding the number of characteristics per case (the 9 features listed on Table 2), I divided the groups according to those falling above and below the overall median of 5.5 (range: 3-9). Of the 33 cases with veridical observations, only 9 (27%) contained at or above the median number of case characteristics. Of the 38 cases without veridical observations, 27 (71%) contained at or above the median number of case characteristics. This difference was significant ($\chi^2(1) = 10.27, p = .003, \phi = .38$). However, this finding may not be telling us anything about the complexity or structure of the experience; instead, it could be only a function of the features that Sabom decided to include in his analysis. Analyses of the incidence of particular features presented in Table 2 show lower incidence of "other-world" or nonordinary features in the cases with veridical observations than in the other cases, although statistical significance was obtained only as regards a transcendental environment and encountering spiritual entities. This suggests that the attention necessary for those observations to take place deploys the cognitive resources presumably related to the production of the experience in relation to the physical world while neglecting other variants of the experience. It may also be an indication that there is some validity for a typology of OBEs regarding naturalis-

Table 2

COMPARISON OF NDE FEATURES IN CASES WITH AND WITHOUT REPORTS OF VERIDICAL OBSERVATIONS CLOSE TO THE BODY STUDIED BY SABOM (1982)

Features	Veridical Observations	
	Yes (N = 33)	No (N = 38)
Sense of being dead	91%	92%
Feelings of calm and peace	100%	100%
Sense of body separation	100%	100%
Dark region or void	15%*	32%*
Life review	3%	8%
Light	18%	32%
Transcendental environment	27%**	63%**
Entities	27%***	
68%***		
Return	100%	100%

* Fisher's Exact $p = .06$ (2t), ϕ estimated = .22

** Fisher's Exact $p = .004$ (2t), ϕ estimated = .34

*** Fisher's Exact $p = .001$ (2t), ϕ estimated = .39

tic and supernaturalistic experiences, an idea supported by the low number of Sabom's cases combining both features. But again, the limited number of features compiled by Sabom should be expanded to conduct a fair test of this idea. In any case, this shows one of many unexplored possible associations between OBE features.

Another aspect deserving exploration is the order of features as the experience unfolds. Crookall (1961, 1964b) has commented on stages of the experience, as has Ring (1980) in his study of NDEs. But there is need for further work considering other aspects, such as cross-cultural comparisons.

Psychological Variables

Another area deserving exploration is the relationship between psychological variables and OBE features. There is a literature of various attempts to relate the OBE to cognitive and personality variables as well as to other experiences, such as lucid dreaming and dream recall. But these studies correlate such psychological variables only to the occurrence of the OBE as a unitary experience (for reviews see Alvarado, 1986b, 1988; Irwin, 1985, pp. 197-207). There have been relatively few attempts to relate psychological measures to individual features of the OBE. Some exceptions include Irwin's findings of positive relationships between reports of OB bodies and absorption scores (Irwin, 1985, p. 287) and recollection of dreams from an exteriorized perspective, as opposed to a viewer-oriented one (Irwin, 1986, p. 214).

My own not too successful work in this area includes an aborted attempt, due to insufficient number of cases in which ESP was claimed, to study belief in ESP in relation to the ESP components of OBEs (Alvarado, 1986a), and nonsignificant findings in comparisons of the level of vividness of visual imagery in relation to variables such as OBE frequency, form of self-perception, and quality of visual perception (Alvarado, 1984). In a recent reanalysis of my OBE cases, I correlated level of dream recall (rated on a 1-4 scale as before the OBE) to number of characteristics per case (7 characteristics). The correlation was not significant ($r_s(56) = .22$). I performed the same analysis in relation to OBE frequency. Neither single ($r_s(8) = .19$) nor multiple OBE cases ($r_s(44) = .21$) achieved significance.

The psychological study of OBE features could be extended to studies modeled on Greyson's (1992), who obtained a negative correlation between the depth of NDEs and the level of death threat. Would there be positive correlations between variables such as dissociation, hypnotic susceptibility, and fantasy proneness and the depth or overall number of OBE characteristics? Perhaps the correlations will be stronger with particular OBE features or with clusters of them, such as those which seem to define a supernaturalistic experience (e.g., seeing entities, entering a different dimension). I am currently conducting research along this line and hope to extend it to analyses that probe interactions with other variables (e.g., sex and age of experimenter) and attention to the different factors of the psychological scale being used.

Another topic deserving systematic exploration is the potential influence of expectation and belief. Irwin (1985, p. 139) observed: "Expectations seem to influence the OBE's content and certain characteristics of the astral structures." Although some of the accounts of astral projectors may give some support to this idea, it is unfortunate that no systematic studies on the subject have been conducted. There are a variety of ways to tap into the possible influence of expectation and belief, including comparing the OBEs of individuals known to have had previous knowledge about the experience (Irwin, 1985, p. 195) and of those who have studied particular philosophies or movements, such as theosophy and spiritualism, to experiencers who have no such knowledge or interest. Differences are often assumed by those who discuss the OBE, but to date there is no adequate empirical evidence to support meaningful conclusions on this point.

In addition to survey and case collection work, perhaps the influence of expectation may also be explored in the laboratory, following designs used in hypnosis research to study the influence of demand characteristics and other situational factors (de Groth, 1989).

Age, Frequency of OBEs, and Adaptation Mechanisms

Another area that needs exploring is the possible change in OBE content in the same individual over time and the accumulation of experiences. If the OBE is a particular model of reality created by our cognitive system

(Blackmore, 1984), then it is logical to expect some changes over time as the system gets used to generating and maintaining such a map of reality. As Blackmore (1982) puts it, "the longer experiences or the multiple cases of adepts and frequent OBEs should be more varied than single short ones. The practiced OBEer should be able to jump about in his cognitive map, moving in every way his imagination allows" (p. 248). Rogo's (1976b, p. 77) analysis of Oliver Fox's OBEs arranged over time are consistent with this model to some extent. The same may be said of Green's (1968) descriptive study of sensory modalities and of a later study that found a positive association between multiple experiences and the following OBE features: sense of energy, hearing noises, feeling vibrations, seeing the body, passing through objects, awareness of presence of beings, and seeing brilliant lights (Twemlow, Gabbard, & Jones, 1982). However, a reanalysis of my cases did not reveal differences in the number of characteristics (1-7 characteristics) per report of single ($N = 11$) and multiple ($N = 47$) experiencers ($Md = 1$, for both groups).

Irwin (1985, pp. 84, 86) did not find any relationship between age and onset and terminal OBE sensations. A reanalysis of my data in terms of age and number of characteristics per case (1-7 characteristics) yielded nonsignificant correlation coefficients for all the available cases ($r_s(55) = .07$) as well as for single ($r_s(9) = -.36$) and multiple experiences ($r_s(42) = .19$). The trend in the single group, however, deserves further exploration.

Perhaps, as suggested by the case studies of Gabbard and Twemlow (1984), OBEs may be related to life situations in the sense that they serve psychological functions (e.g., are adaptation mechanisms). It would be instructive to see if the content of the OBE changes over time the same way defense mechanisms change in dissociative phenomena. Presumably disorders such as multiple personality do not develop as such immediately, but become integrated over time as a more complicated defense mechanism of the dissociative type. Putnam (1993) argues: "The repeated use of dissociative defenses by a child, perhaps in response to a repetitive trauma such as incest, is thought to lead to a generalization of dissociative defenses to other stresses and possibly the development of a chronic dissociative disorder such as MPD [multiple personality disorder]" (p. 6). Some OBEs may show a similar pattern in the sense that the features change over time as a function of the frequency and intensity of situational factors.

CONCLUDING REMARKS

As seen in the above discussion, there is much that needs to be done to understand the configuration of OBEs. However, although many of the ideas discussed here have been presented in terms of simple descriptions and interactions, it should be kept in mind that we should extend our studies and conceptualizations to cover the interrelationship of many variables. For example, the effect of frequency of the OBE on the experience's content may be related to age, and knowledge and expectations about the ex-

perience in general, and about its features. In addition, one hopes that some of this future work will study the variety of OBE features following particular models or theories to explain the experience, as Irwin (1985, chapter 8) has done regarding his synesthetic model.

A research program based on the above studies and suggestions will contribute to our understanding of the nature of the OBE. Not only is this approach useful to test particular claims or theories about the experience, but such testing of models necessarily involves closer attention to the phenomenology of the OBE.

This approach will also allow us to address empirically concerns like that of Tart (1974), who postulates that we should define an experience to be an OBE only if they are discrete in the sense of having a complete separation from the physical body. In this view, the OBE is a specific phenomenon that has no continuum or degrees of being in and out of the body, as defended by Grosso (1976). This, in turn, is related to the issue of how to define the experience. As argued elsewhere (Alvarado, 1986b, pp. 161–162; Palmer, 1974, p. 107), precise definitions of the experience and of its variety are generally extremely subjective and connected to theoretical models that prejudice the issue in question. We hope future work will combine such conceptualization with more empirical lines of research such as the ones described in this paper. This work could benefit from the use of standardized questionnaires and attention to qualitative descriptions of the experiences. By following such a course we will eventually be in a position to develop empirically derived typologies that will deepen our understanding of the varieties of the OBE. As a consequence, we may be in a better position to understand the relationship of the OBE to other states of consciousness and to other psychological processes. One hopes that such developments eventually will both help experiencers to control the OBE and aid clinicians who deal with experiencers by providing information about the likely constancy and variance of OBE features. At the very least, the findings of a research program emphasizing the subjective characteristics of the OBE can do no less than to help us to get a clearer picture of and to normalize an experience whose nature continues to elude us.

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An Experiment With the Alleged Human Aura

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ABSTRACT: An experiment is reported here on the ability of special subjects to see the alleged human aura. The main import of the paper, however, lies in the fact that it provides the groundwork for future experiments. A thorough review of the relevant literature is presented, not only of parapsychology but psychology, psychiatry, and occult and traditional lore surrounding the human aura. The study involved two groups: an experimental group of 10 people who claimed to see the aura and a control group of 9 people not known to have seen the aura. Four 90 cm x 200 cm screens were placed in a row in a room facing the door. One experimenter (L. R. G.) guarded the participant. A trial consisted of the subject standing in the doorway and guessing behind which of the screens the second experimenter (A. G.), who served as the target person, was hidden. The door was closed between trials while A. G. moved to the next target screen in a random order. Instructions to the experimental group were to attempt to locate A. G. by auric emanations streaming out from behind the screen where he was hidden. Each session involved 40 trials, and each group completed 18 individual sessions, for a total of 36 sessions overall. Statistical analysis yielded nonsignificant results for both groups combined. The experimental group obtained 185 hits ($z = .43, p = .33$) and the control group 196 hits ($z = 1.38, p = .08$). The subjects' phenomenology is discussed, and to guide future research, several ways of theorizing about the aura are reviewed, including an aura imagery model proposed by the authors.

Zingrone (1995) argues that parapsychology should not neglect research on phenomena generally associated with the occult tradition, such as the human aura. This paper describes an experimental attempt to investigate the claim that some people can see the alleged human aura and provides considerable background information to facilitate research by others. The relevant literature is reviewed, not only of parapsychology but of psychology, psychiatry, and occult/traditional lore; and the phenomenology of our subjects is also described. Furthermore, we review several possible ways of theorizing about the aura and provide a lengthy list of references.

Claims regarding the alleged human aura by and large have remained uninvestigated, unlike the Kirlian photographic corona, for which there is a considerable professional literature describing various experiments with the Kirlian photographic "aura" (e.g., Burton & Joines, 1974; Burton, Joines, & Stevens, 1975; Choudhury, Kejarawal, & Chattopadhyay, 1979; Chudacek & Matousek, 1987; Iovine, 1986; Johnson, 1975; Kirlian & Kirlian, 1961; Krippner & Rubin, 1974; Leach, 1981; Moss, 1974; Mucha, 1985; Murstein & Hadjoliian, 1977; Stevens, Burton, & Joines, 1975; see also White, 1988, for a bibliography, and Ostrand & Schroeder, 1976, for popular treatment).