

THE JOURNAL OF THE AMERICAN SOCIETY FOR PSYCHICAL RESEARCH

VOLUME 71

JULY ~ 1977

NUMBER 3

Deathbed Observations by Physicians and Nurses: A Cross-Cultural Survey

KARLIS OSIS AND ERLENDUR HARALDSSON¹

ABSTRACT: Surveys of deathbed observations were conducted in the United States and in India to replicate the findings of a pilot survey carried out in 1959-60 and to gather more detailed data relevant to the question of post-mortem survival. Physicians and nurses filled in questionnaires and subsequently were interviewed concerning 442 cases in the United States and 435 in India. The most frequently reported phenomenon was that of terminal patients having hallucinations of human figures.

The main findings of the pilot survey were confirmed in the present survey in both cultures. Again, four-fifths of the apparitions were "survival related"; that is, they portrayed deceased persons and religious figures. This is in sharp contrast to the hallucinations of a normal population. Three out of four apparitions were experienced as having come to take the patients away to a post-mortem modus of existence, to which 72% of them consented. More patients responded with serenity, peace, and elation (41%) than with negative emotions (29%) to this ostensible invitation to die.

The data were analyzed for interaction with various medical, psychological, and cultural factors which could cause or shape hallucinations. In conformity with the survival hypothesis, the deathbed visions were found to be relatively independent of these factors as they were assessed in the population surveyed.

INTRODUCTION

At times dying patients "see" persons and visionary landscapes which others present do not see. Usually such deathbed visions are

The American survey was conducted with the support of the late Chester F. Carlson. The greater part of the Indian survey was funded by the James Kidd bequest. We are grateful to our Indian collaborators, particularly Dr. J. Prasad and Mr. P. Dayal, and to our American consultants, especially Dr. Gardner Murphy.

interpreted as mere hallucinations which have no basis in external reality. In the early years of psychical research, Myers (1903) and Hyslop (1908) recognized some possibly paranormal elements in a few selected cases of visions of dying patients. Sir William Barrett, a physicist of the Royal College of Science, Dublin, was interested in such cases and presented a number of them in a small book entitled *Death-Bed Visions* (1926). While some of his cases were carefully observed by physicians and nurses, others are of lesser evidential quality. Barrett was particularly impressed by visions that seemed to mirror some form of contact between patients who were fully rational and cognizant of their physical surroundings and their deceased relatives who, presumably, had passed on to the "other world." Often in these cases the ostensible purpose of the deceased was to take the patient away to a post-mortem plane of existence. Barrett emphasized cases in which apparitions ran contrary to the patient's expectations, for example, apparitions of persons the patient thought were still living, but who in fact were dead. In several of Barrett's cases the apparitions were experienced either with exalted feelings or with emotions of serenity and peace. Deathbed visions, Barrett pointed out, often did not conform to cultural stereotypes, e.g., dying children were surprised to see "angels" without wings.

Some 30 years later, Barrett's work inspired one of us (K.O.) to systematically study deathbed experiences using modern survey methods and statistical evaluations. In 1959-60, under the auspices of the Parapsychology Foundation, K.O. conducted such a survey. It was the first of its kind and will be referred to in this paper as the "pilot survey." The report on the pilot survey was published by the Parapsychology Foundation as a monograph, *Deathbed Observations by Physicians and Nurses* (Osiris, 1961).

K.O. found that deathbed visions which appear to be suggestive of post-mortem survival tended to be independent of factors known to cause hallucinations, enhance their occurrence, or influence their content. Medical factors—such as illness predisposing to hallucinatory experiences, high fevers, medication with morphine, etc.—did not seem to generate an increase in the frequency of after-life related experiences. In some instances, such medical factors even appeared to suppress survival-related phenomena. Moreover, personal variables such as the patient's sex, age, education, socio-economic status, and religious affiliation also appeared to be of little importance.

The contents of the dying patients' hallucinations were analyzed and found to be different from those of hallucinations in the general population and the mentally ill. For example, hallucinations of the dying are usually visual, as is the case in most ESP experiences, and rarely auditory, the predominant mode in mentally disturbed

persons. Terminal patients were reported to have seen apparitions of the deceased, rather than of the living, two or three times more often than do people in the general population. Of all the apparitions of identified persons, 90% were of relatives of the patient; of these, 90% were close relatives: mother, father, spouse, sibling, and offspring. This occurs infrequently in the hallucinations of the general population.

K.O. also performed extensive interaction analyses on the data of the pilot study. This led to the discovery of many patterns which supported the post-mortem survival hypothesis. He believed, however, since most of the findings were post hoc, that without verification in later surveys the weight of the findings would be rather limited.

The two new cross-cultural surveys described in this paper were carried out to replicate the pilot study. The range of questions was greatly expanded in order to obtain more information which might either support the evidence for post-mortem survival, or provide facts contradicting it and thus lend weight to what we have termed the "destruction hypothesis." Information from the pilot survey and other sources was used to formulate a model, or series of hypotheses concerning deathbed visions. The model is a bi-polar one which sharply contrasts two mutually exclusive concepts: the survival hypothesis and the destruction hypothesis.

A MODEL OF THE TWO BASIC HYPOTHESES OF DEATHBED VISIONS

Survival	Destruction
Death is the transition to another mode of existence.	Death is the ultimate destruction of the personality.

A. Sources of Deathbed Visions

Extrasensory Perception	Sick Brain or Delusions
1. Extrasensory awareness of discarnate entities, e.g., deceased relatives and religious figures.	1. Malfunction of the nervous system and the dying brain.
2. Clairvoyant or precognitive glimpses of post-mortem existence.	2. Schizoid reactions to severe stress.

B. Influence of Hallucinogenic Factors on Deathbed Visions

Independent of Medical Factors	Dependent on Medical Factors
1. The presence of hallucinogenic medical factors will not	1. The presence of hallucinogenic medical factors will in-

increase the frequency of visions related to post-mortem existence.

2. Conditions detrimental to ESP will decrease the frequency of after-life related phenomena.

C. Content of Deathbed Visions

Perceptions

1. After-life related visions will be relatively coherent, and oriented to the situation of dying and the transition to another mode of existence, including "other-worldly" messengers and environments.

D. Influence of Psychological Factors on Deathbed Visions

Conditions Related to Awareness of an "Other World"

1. Clarity of consciousness and an intact sense of reality will facilitate awareness of an "other world" and its messengers, while states in which contact with external reality is absent will impair such awareness.

2. Patients' expectation of recovery or dying will not influence the occurrence of after-life related visions.

3. Presence of stress will not increase the frequency of visions related to an after-life.

crease the frequency of hallucinations related to post-mortem existence—i.e., the more disturbed the brain processes, the more numerous the "other-world" fantasies.

2. ESP not involved.

Hallucinations

1. Hallucinations will portray only memories already stored in the brain and express desires, expectations, and fears of the individual, as well as beliefs characteristic of his culture.

Conditions Related to Hallucinations of This World or "Other-World" Fantasies

1. Clarity of consciousness and an intact sense of reality will be less conducive to all kinds of hallucinations than states in which contact with reality is absent.

2. Patients' expectation of recovery will facilitate this-life hallucinations, while expectation of dying will facilitate hallucinations of an after-life.

3. Presence of stress will increase the frequency of hallucinations related to an after-life.

E. Variability of Content Across Individuals and Cultures

Perceptions

1. Little variability.

2. Visions involving basic characteristics of the "other world" will be essentially similar for men and women, young and old, educated and illiterate, religious and nonreligious, Christian and Hindu, American and Indian. Only minor differences among them will be expected.

Hallucinations

1. Much variability.

2. Hallucinations are purely subjective. They will vary widely with the dispositions, psychological dynamics, and cultural background of the individual.

METHOD

We approached physicians and nurses in both the United States and India in two steps: (a) a two-page initial questionnaire was distributed concerning the extent and kinds of observations they had made of dying patients, and of those who were close to death but recovered; (b) individual interviews were held with respondents on the details of cases reported in the questionnaires and which fell within the scope of the survey.

Questionnaires and Procedure

The survey in the U.S. was conducted between 1961 and 1964 in New York, New Jersey, Connecticut, Rhode Island, and Pennsylvania. The second survey was carried out in Northern India during 1972-73.

Although the same basic questionnaire was used in both surveys, slight adjustments were made in the questions asked of the Indian respondents—e.g., tropical diseases and the Hindu and Moslem religions were covered—in order to accommodate them to the cultural differences.

In the initial questionnaire we asked the medical personnel about their observations of the following:

1. Hallucinations of human figures experienced by (a) terminal patients (those not recovering), and (b) by non-terminal patients (those who were close to death but recovered).
2. Hallucinations of surroundings (landscapes, etc.) experienced by (a) terminal patients, and (b) by non-terminal patients.
3. Mood elevation (sudden rise of mood to elation or serenity) in terminal patients.

In the U.S. the questionnaire, with a covering letter, was mailed to a stratified random sample of 2500 physicians and 2500 nurses. Those not responding received another letter asking for a reply. A total of 1004 responses was received.

Our Indian consultants advised us not to use the mails to distribute the questionnaire. We therefore worked mainly in large university hospitals. Usually the professor of medicine or professor of surgery arranged meetings with the hospital staff during which we gave a short talk and distributed the questionnaires to be filled out. Practically all the physicians and nurses we approached returned the completed questionnaires (a total of 704).

Interviews

American respondents who reported pertinent cases were interviewed by telephone. In India, telephone contacts had to be replaced by personal interviews, mainly in hospitals but sometimes in the homes of the respondents.

We developed three separate follow-up questionnaires for the following types of experience: (a) hallucinations of human figures, (b) hallucinations of surroundings, and (c) mood elevation. Each of these questionnaires consisted of 69 questions used to guide the interview.

Open-ended questions were used, e.g., "What was the patient's behavior indicating that he/she was experiencing hallucinations?" Questions proposing a set of alternative answers were also used, e.g., "Was the patient calmed by the hallucination, did he/she become excited, or was there no apparent effect?"

Questions covered (a) characteristics of the patient such as sex, age, education, religious belief and degree of involvement in it, and belief in an after-life; and (b) medical factors such as diagnosis, medical history, medication, temperature, and clarity of consciousness. Additional questions elicited information from the respondents concerning their date of graduation from professional school, degree received, religious beliefs, belief in life after death, and attitudes toward hallucinations. The main part of the questionnaire was devoted to obtaining as many details as possible about the experience reported, e.g., how the patient described the hallucination. A total of 877 cases, about evenly divided between the U.S. and India, comprise the main part of the data.

Evaluation of the Data

The interview data were coded and recorded on computer cards. Each item in the various categories was analyzed for frequency of occurrence. For example, responses to the question, "What was the primary diagnosis of the illness?" were grouped into basic categories

such as malignancies, cardiovascular disease, respiratory disease, kidney disease, brain disease or injury, etc. Then the data were submitted to cross-tabulations. Items describing factors that might influence each other were considered jointly: for example, comparisons between the number of patients suffering from diseases known to cause hallucinations (brain diseases, uremia) and the number of patients suffering from other kinds of diseases were made in terms of the frequency with which the patients hallucinated living persons, dead persons, etc. Differences were assessed by chi-square statistics. We report below only probabilities associated with the chi-square analyses. We used the significance level of $P = .05$ (two-tailed).

RESULTS

We completed a similar number of interviews in the U.S. (442) and in India (435). The vast majority of patients involved were terminally ill (714). We also had 163 cases of patients who recovered from near-death conditions. Hallucinations of human figures, or seeing apparitions, was the type of phenomenon most frequently reported (by 591 patients). A total of 112 vision cases were primarily of heavenly abodes, landscapes, gardens, buildings. In 174 cases, patients did not report seeing anything unusual, but their moods became elevated to serenity, peace, elation, or religious emotions. This report covers only cases of apparitions of human figures seen by terminal patients (471 cases).

Characteristics of Apparitions Seen by Terminal Patients

As noted above, reports of terminal patients "seeing" persons not observed by others present comprise by far the largest and most interesting part of our data. The sample derives from 216 interviews with American respondents and 255 from Indian respondents.

Duration of apparition. As in most instances of spontaneous ESP, the apparitional experiences were usually of quite brief duration: 48% lasted for five minutes or less, 17% from six to 15 minutes, and only 17% for more than an hour (Table 1, Row a).

Timing of apparition. The closer in time the apparition was to the patient's death (Table 1, Row b), the more frequently it had characteristics suggestive of an after-life. The time between seeing an apparition and losing consciousness was generally shorter than the time between losing consciousness and clinical death.

Identity of apparition. The apparitions in our sample portrayed living persons, dead persons, and mythological or historical religious figures. According to the findings of the pilot study, apparitions of the living have nothing to do with post-mortem survival. On the other

Table 1

CHARACTERISTICS OF THE APPARITIONAL EXPERIENCE
IN TERMINAL PATIENTS

Variables	Characteristics	Number of Cases			Percentage*		
		U.S.	India	Total	U.S.	India	Total
a. Duration of apparition	1 sec.-5 min.	85	83	168	65	38	48
	6-15 min.	17	43	60	13	20	17
	16-59 min.	11	50	61	9	23	18
	1 hr.-1 day	13	31	44	10	14	13
	Longer	4	10	14	3	5	4
b. Interval between apparition and death	No information	86	38	124	—	—	—
	0-10 min.	17	36	53	9	14	12
	11-59 min.	7	59	66	4	23	15
	1-6 hrs.	26	64	90	13	25	20
	7-24 hrs.	28	41	69	14	17	15
c. Identity of apparition	Longer	117	52	169	60	21	38
	No information	21	3	24	—	—	—
	Living	30	38	68	16	20	18
	Dead	124	54	178	66	28	47
	Religious figure	22	93	115	12	48	30
d. Sex of apparition	Combination of above	11	7	18	6	4	5
	No information	29	63	92	—	—	—
	Male	59	103	162	39	77	57
	Female	91	30	121	61	23	43
	No information	66	122	188	—	—	—
e. Purpose of apparition	Taken for visitor	14	28	42	14	14	14
	To comfort patient	13	4	17	13	2	6
	To take patient away, with consent	40	102	142	41	50	47
	To take patient away, without consent	1	53	54	1	26	18
	To send patient back	0	2	2	0	1	1
f. Emotional reactions, 1st group	Threatening	4	13	17	4	6	6
	Reliving memories	26	1	27	27	1	9
	No information	118	52	170	—	—	—
	No effect or relaxation	60	65	125	31	28	30
	Serenity	46	49	95	23	18	20
g. Emotional reactions, 2nd group	Elation	56	32	88	29	14	21
	Negative	33	91	124	17	40	29
	No information	21	27	48	—	—	—
	No effect or relaxation	60	65	125	31	28	30
	Negative	33	91	124	17	40	29
h. Emotional reactions, 3rd group	Positive, nonreligious	77	36	113	39	16	27
	Positive, religious	25	36	61	13	16	14
i. Emotional reactions, 4th group	No information	21	27	48	—	—	—
	No information	21	27	48	—	—	—

Table 1 (Continued)

Variables	Characteristics	Number of Cases			Percentage*		
		U.S.	India	Total	U.S.	India	Total
2nd group	Positive, religious	25	36	61	13	16	14
	No information	21	27	48	—	—	—

*Percentages do not include cases about which no information was available. Figures in some percentage columns do not add up to 100 due to rounding off.

hand, apparitions of the dead and of religious figures may have characteristics suggestive of life after death. We termed apparitions in this category "survival-related apparitions," and they comprised 80% of the cases in the pilot survey. The proportion of survival-related apparitions in the present survey was remarkably similar to that of the pilot survey: 83% in the U.S. and 79% in India (Table 1, Row c).

Could these proportions be characteristic of hallucinations in general among persons who are not near death? Fortunately, two British surveys of hallucinations experienced by the general population provided data for comparison. In the "Census of Hallucinations" (H. Sidgwick and Committee, 1894) it was reported that only 33% of the sample had hallucinations similar to those in our survival-related group; D. J. West (1948, p. 190) reported 22% in a "mass observation" survey. (Categories that do not fit our classification scheme are excluded in the calculation of these percentages.) Thus we conclude that terminal patients in both the pilot and in the present survey saw apparitions of the dead and of religious figures about three times more frequently than the general population sampled in these two British studies.

While the proportion of survival-related apparitions in the U.S. and India is remarkably stable, the identity of the apparitions experienced within this group varied greatly. American patients for the most part saw deceased persons while Indian patients predominantly saw religious figures (Table 1, Row c; Table 2, Rows a and b). In a detailed analysis to be reported elsewhere we were able to trace some, but not all, of the reasons which might account for these differences. In the visions of the Indian patients (especially the males), female figures were extremely rare (Table 1, Row d). This fact alone could have reduced the total number of apparitions of the dead, thereby increasing the proportion of religious figures in the Indian sample (Table 2, Row b). Thus, while the frequency of survival-related apparitions is the same in both samples, the characteristics of these apparitions are strongly molded by cultural forces.

Table 2

IDENTITY OF APPARITIONAL FIGURES*

Variables	Identity	Number of Figures			Percentage**		
		U.S.	India	Total	U.S.	India	Total
a. Secular	Mother	60	16	76	28	14	23
	Father	15	16	31	7	14	9
	Spouse	49	10	59	23	8	18
	Sibling	27	15	42	12	13	13
	Offspring	27	17	44	12	14	13
	Other relatives, previous generation	5	7	12	2	6	4
	Other relatives, same generation	2	10	12	1	8	4
	Other relatives, next generation	0	4	4	0	3	1
	Unidentified relatives	9	14	23	4	12	7
	Friends, acquaintances	21	8	29	10	7	9
	Unidentified persons	25	61	86	—	—	—
Totals:		240	178	418	—	—	—
b. Religious	God or Jesus	13	17	30	42	22	28
	Shiva, Rama, Krishna	0	13	13	0	17	12
	Mary, Kali, Durga	5	4	9	16	5	8
	God of death & messengers	0	18	18	0	24	17
	Saints & gurus	3	5	8	10	7	8
	Angels, Devi, etc.	9	17	26	29	22	24
	Demons & devils	1	2	3	3	3	3
	Other religious figures, unidentified	2	31	33	—	—	—
Totals:		33	107	140	—	—	—

*Totals include cases in which several figures were seen by the same patient.

**Percentages do not include cases about which no information was available. Figures in some percentage columns do not add up to 100 due to rounding off.

Ninety-one percent of all identified apparitions of persons were relatives of the patient. (In 20%, the identity of the apparition was not ascertained.) Of these, 90% were close relatives, i.e., mother, spouse, offspring, sibling, and father—in that order of frequency (Table 2, Row a). The religious figures were usually described merely as an angel or god, or were unidentified. When identified they were named according to the patient's religion, e.g., no Hindu reported seeing Jesus; no Christian a Hindu deity.

Purpose of apparition. Quite often patients told respondents why the apparition had visited them. In 50% of the cases in the pilot survey, the stated purpose of the apparition was to aid patients in their transition to another world: "to take them away." In the present

study this purpose was reported in 65% of the cases (Table 1, Row e). For further analyses we excluded two somewhat ambiguous categories: that the figure came "to comfort" the patient, which could imply either a "this-life" purpose or a "take-away" purpose, and cases where patients were said to be "reliving memories" which, of course, indicates no contemporary purposes. Thus, after adjusting the data in this way, the take-away purpose is clearly dominant in all three surveys: pilot, 76%; U.S., 69%; India, 79%.

Patients' response to apparition. In the pilot survey it was found that a large majority (89%) of the patients who saw apparitions with a take-away purpose eagerly consented "to go" with them. Although consent was expressed in 72% of the present survey's take-away cases, 28% did not consent, and some patients reacted with fright and screams for help. Practically all these negative responses came from Indian patients who refused to consent (Table 1, Row e). In our unpublished interaction analyses we found that this difference in consent between the U.S. and Indian samples may be partly due to the patients' religion and partly to their nationality.

Patients were said to have reacted to the apparition with noticeable emotions in 70% of the cases.² Many of them reacted with positive emotions (41%), while a considerable number (29%) had negative emotions—particularly in cases where the patient did not consent "to go" with the apparition. Of those with positive emotional reactions, half were serene and peaceful and half were elated (Table 1, Row f). We also asked our respondents to evaluate patients' positive emotions as religious or nonreligious feelings (Table 1, Row g). They reported that 35% of those positive emotions were of religious nature. Terminal patients usually suffer from pain and other kinds of discomfort; consequently their moods are rather depressed. The elation and serenity that the survival-related apparitions aroused in most of the patients contrasted sharply against the gloom of dying.

Medical Factors

Drugs. Various medical factors are known to increase the likelihood of hallucinatory behavior. Medication consisting of certain analgesics and sedatives, such as morphine and Demarol, might have caused hallucinations in some of our cases. However, the majority (61%) of the 425 patients about whom we have such information had not received drugs which could cause hallucinations. Half of those who were under sedation had received such small doses or such weak

² Patients' emotional reactions to apparitional experiences were ascertained on an alternative question scale. For our analyses items registering positive emotions were grouped together as (a) either serenity or elation (Table 1, Row f), or (b) either positive nonreligious emotions or positive religious emotions (Table 1, Row g).

drugs that the respondents did not consider them to have been psychologically affected. Of the 20% who were influenced, more than half (11%) were said to be only mildly affected. Eight percent were moderately affected and only 1% strongly affected (Table 3, Row d). Thus the evidence indicates that in most cases the apparitional experiences were not drug-induced.

Temperature. High body temperature sometimes leads to hallucinations. Only 8% of the patients ran fevers of over 103 degrees (measured orally) which might have facilitated hallucinatory behavior (Table 3, Row c).

Diagnoses. Hallucinations may be associated with injury and diseases of the brain, and with uremic poisoning caused by kidney malfunction, although many brain-injured patients, especially those with strokes, do not hallucinate. Only 12% of the patients in our sample, including stroke cases, had such diagnoses (Table 3, Row a).

In addition to primary diagnoses, we also considered secondary illnesses, previous illnesses, and any other factors in the patient's history which might have been hallucinogenic, e.g., alcoholism or mental illness. This measure is rather inflated since we included in it diagnoses only suspected by the physician and diseases which were not active at the time of the terminal illness. We also included the primary diagnoses involving the three hallucinogenic categories discussed above. Only 25% of the patients had secondary diagnoses which could have been hallucinogenic (Table 3, Row b).

"Hallucinogenic index." It was also important to know how many patients might have had at least one of the following possible hallucinogenic factors: drugs, high fever, and primary and/or secondary diagnoses of a hallucinogenic nature. We therefore established a "hallucinogenic index" which includes every patient who had one or more of the above-mentioned indices. It should be noted that we included in this index cases which do not strongly suggest that the patients' hallucinations were of an abnormal origin, e.g., stroke cases, cases in which medication only slightly affected clarity of consciousness, etc. Nevertheless, such indices are present in only 38% of the cases; the majority (62%) are free of them. In the pilot survey, it was found that deathbed visions are relatively unaffected by medical factors. The data from the present survey give the same impression.

Clarity of consciousness. We inquired into the clarity of consciousness of the patient at the time of the apparitional experience, a condition which is closely related to medical factors. We had this information for 457 cases. Almost half (43%) the patients were in a normal state of consciousness; they were fully aware of and responsive to their environment. In 29% awareness was mildly impaired, but the respondents could still communicate with their

patients. Only 17% were in such a severely impaired state of consciousness that little or no communication was possible. In 11% clarity fluctuated and could not be accurately determined for the times the hallucinations were experienced (Table 3, Row e).

Hallucinogenic medical factors are clearly absent in two-thirds of our data. Could these factors nevertheless have affected the remaining third of the patients who were included in the "halluci-

Table 3
MEDICAL STATUS OF TERMINAL PATIENTS SEEING APPARITIONS

Variables	Medical Status	Number of Patients			Percentage*		
		U.S.	India	Total	U.S.	India	Total
a. Primary diagnosis	Cancer	79	28	107	37	11	23
	Heart & circulatory disease	61	39	100	29	16	22
	Injury & post-operative	10	62	72	5	25	16
	Respiratory disease	9	26	35	4	11	8
	Brain injury/disease, uremia	28	26	54	13	11	12
	Miscellaneous	25	64	89	12	26	19
	No information	4	10	14	—	—	—
b. Secondary diagnosis, possibly hallucinogenic	Present	68	40	108	33	18	25
	Absent	137	187	324	67	82	75
	No information	11	28	39	—	—	—
c. Body temperature (oral)	Less than 100°	128	129	257	64	53	58
	100°-103°	55	94	149	28	39	34
	Above 103°	16	20	36	8	8	8
	No information	17	12	29	—	—	—
d. Medication affecting consciousness	None	94	165	259	49	71	61
	Medication, no effect	39	40	79	20	17	19
	Mildly affected	31	18	49	16	8	11
	Moderately affected	22	10	32	12	4	8
	Strongly affected	5	1	6	3	0	1
	No information	25	21	46	—	—	—
e. Clarity of consciousness	Clear	98	100	198	48	39	43
	Mildly impaired	31	103	134	15	41	29
	Severely impaired	36	39	75	18	15	17
	Fluctuating	38	12	50	19	5	11
	No information	13	1	14	—	—	—

*Percentages do not include cases about which no information was available.

nogenic index"? Could they have spuriously enhanced the frequency of those characteristics which were found in the pilot study to support the post-mortem survival hypothesis? These characteristics are (a) predominance of survival-related apparitions of dead persons and religious figures, (b) their "take-away" purpose, and (c) the patients' appropriate emotional reactions. Cross-tabulations between the "hallucinogenic index" and the nature of the apparition (living, dead, or religious figure) show that there was no significant interaction. The presence of hallucinogenic factors did not increase the frequency of survival-related trends such as apparitions of the deceased, religious figures, or expression of the "take-away" purpose. Hallucinogenic factors did, however, significantly affect the expected emotional reactions of the patients in the American sample ($P = .03$). They seemed to suppress serenity, peace, and religious emotions, and to increase the incidence of negative reactions. This trend is not significant in the Indian sample. We conclude that the medical variables ascertained in the survey seem to be relatively unrelated to the apparitional experiences in terminal patients.

Demographic Factors

Demographic factors such as age, sex, educational level, and occupation (Table 4, Rows a-d) did not interact significantly with any aspects of the patients' apparitional experiences.

Psychological Factors

We analyzed several psychological factors to determine whether they tended to shape the phenomenological aspects of the main phenomena: apparitions of the living, the dead, and religious figures; purpose of the apparitions; and the patients' emotional reactions to them.

Stress. Hallucinations tend to occur in situations of severe stress and social deprivation (Siegel and L. J. West, 1976; L. J. West, 1962). Not only are visits to terminal patients by relatives and friends often restricted, but most such patients are going through very stressful situations, compounded by having to cope with severe pain. Therefore, could their hallucinatory experiences be due to stress rather than to extrasensory awareness of "visitors" from another mode of existence? We attempted to answer this question by evaluating an indirect indication of stress found in the data of the patients in our sample—their mood on the day before the hallucination occurred. We assumed that negative moods such as anxiety, anger, or depression would indicate more stress than would positive moods. The least stress, we believed, would be indicated by moods designated by our respondents as "normal" or "average."

Table 4

CHARACTERISTICS OF TERMINAL PATIENTS SEEING APPARITIONS

Variables	Characteristics	Number of Patients			Percentage*		
		U.S.	India	Total	U.S.	India	Total
a. Age	1-30	19	68	87	9	27	19
	31-50	22	97	119	10	38	25
	Over 50	174	90	264	81	35	56
	No information	1	0	1	—	—	—
b. Sex	Male	99	175	274	46	69	58
	Female	117	80	197	54	31	42
c. Education	None, pre-school	13	17	30	7	32	21
	Primary	57	59	116	30	25	27
	High school	73	65	138	39	27	32
	College	45	38	83	24	16	20
	No information	28	16	44	—	—	—
d. Occupation	Professional, manager, clergy	56	29	85	41	19	30
	Clerical, sales, crafts	9	40	49	7	26	17
	Farmer, laborer, services, housewife	70	83	153	52	55	53
	No information	81	103	184	—	—	—
	Hindu	—	214	214	—	85	48
e. Religion	Christian	—	26	26	—	10	6
	Moslem	—	12	12	—	5	3
	Protestant	97	—	97	51	—	22
	Catholic	68	—	68	36	—	15
	Jewish	12	—	12	6	—	3
	Other or none	14	—	14	7	—	3
	No information	25	3	28	—	—	—
	No involvement	12	3	15	8	2	5
f. Degree of involvement in religion	Slight	27	12	39	18	9	14
	Moderate	44	48	92	30	38	33
	Deep	64	65	129	44	51	47
	No information	69	127	196	—	—	—
g. Belief in an after-life	Belief	69	70	139	92	92	92
	No belief	6	6	12	8	8	8
	No information	141	179	320	—	—	—

*Percentages do not include cases about which no information was available. Figures in some percentage columns do not add up to 100 due to rounding off.

There were no significant interactions between the patients' moods on the day prior to the apparitional experiences and what the apparition represented. We also failed to find any appreciable interaction between mood and patients' emotional reactions to the apparitional experience. The purpose of the apparition was not significantly related to mood in either the American or the Indian sample taken separately. However, this relationship is significant in the pooled data from both populations ($P = .001$), and it is in the direction opposite to what would be expected on the hypothesis that stress is a causative factor in apparitional experiences. Patients with normal moods experienced apparitions with a peaceful "take-away" purpose more frequently (54%) than did those who had positive (31%) or negative (27%) moods. From these data we may infer that while the stress experienced by the terminal patients might have caused other kinds of hallucinations, it is unlikely that it affected the incidence of apparitions which expressed purposes related to post-mortem survival.

Desires and expectations. A patient's desires, expectations, or "wishful thinking" might be possible causes of hallucinations. For example, a thirsty traveler in the desert might have the illusion of seeing water when none was there. We ascertained from our respondents the number of patients who had expressed a desire to have a visit from a living person, such as a spouse or a child, and then checked on how many of these persons were later hallucinated. We found only 13 such cases, an insignificant fraction of the total sample. Furthermore, there were no indications in the data to suggest that persons who had recently visited the patient appeared frequently in his hallucinations. Of those visitors, only nine were hallucinated.

Fear of dying. In order to cope with their fear of dying, patients who expect to die might be motivated to hallucinate "messengers" from the after-life. (This would not be the case for patients who expect to recover.) In neither the American nor the Indian sample, however, were the intentions or identity of the survival-related apparitions significantly correlated with the patients' expectations of living or dying. This is particularly apparent in cases where the patient did not consent to the "take-away" purpose of the apparition and screamed for help. Patients' emotional reactions to the apparitional experiences also failed to relate significantly to the motivational variables ascertained in the surveys.

Cultural Factors

We hoped that cross-cultural comparisons would throw light on the hypothesis that some deathbed visions may portray certain aspects of a reality external to the patient.

According to our model we assume that some apparitions may in some way exist independent of the observer. As cultural factors have a more powerful effect on subjective hallucinatory experiences than on observations of external reality, the degree of influence of such factors as religion and belief in post-mortem survival might give a clue as to the true nature of deathbed visions.

Religion. Our sample population consisted mainly of Christians (43%) and Hindus (48%). In the U.S. the stratifications were 51% Protestant, 36% Catholic, 6% Jewish, and 7% unaffiliated or belonging to other religions. Eighty-five percent of the Indian patients were Hindu, 10% were Christian, and 5% were Moslem (Table 4, Row e). This distribution roughly equals the affiliation proportions among the general population in the areas surveyed, except for the small unaffiliated group in the U.S. This discrepancy disappears if we assume that most of the patients whose affiliations were not reported actually were not affiliated with any religious denomination. Apparently religious affiliation was not a factor in determining the phenomena. The question remains, however, whether the patients' religion could have determined the important core characteristics of the apparitions. Religion did not significantly influence the purpose or the kind of apparition seen (living, dead, or religious figures). And both the occurrences of survival-related apparitions (of the dead and/or religious figures) and their after-life purposes appear to have transcended the widely divergent religious ideologies of Hindus, Catholics, Protestants, Jews, and Moslems.

The patients' emotional reactions of serenity, elation, and religious feelings engendered by apparitional experiences were similar among Catholics and Protestants in the U.S. Unfortunately, we had too few patients of other religions for effective comparison in the American sample. Therefore Catholics and Protestants were compared only with the rest of the patients as a whole—including those who were unaffiliated, those of other religions, and those whose affiliations were not reported. This mixed group showed different emotional reactions such as less serenity ($P = .02$) and less religious feelings ($P = .06$).

In India the small minority of Christian patients was reported to have reacted more with serenity and religious emotion than the Hindus did. Part of this difference was traced to the respondent bias of Christian nurses and therefore it cannot be interpreted with reasonable certainty. However, there were more similarities than differences: like Americans, many Hindu patients responded with serenity, peace, and religious emotions.

The real difference between the American and Indian reactions to the apparitional experiences lies in the patients' readiness to consent

to the "take-away" purpose of the apparition: with only one exception, all the American patients were ready "to go," while 34% of the Indian patients were not. Can this be explained in terms of their differences in religion? There was indeed a difference, though not a significant one: only 16% of the Indian Christians did not consent "to go," as compared to 37% of the Hindu patients. It seems probable that this no-consent attitude is due to both national and religious factors. Patients' involvement in religion did not significantly affect the nature of the apparition experienced, its purpose, or their emotional reactions to it.

Belief in life after death. A patient's belief in life after death is important for understanding his ways of coping with approaching death. Yet surprisingly few (one third) of our respondents were aware of their patients' beliefs, or lack thereof, in an after-life. The majority of them reported that they either did not discuss the matter with the patients, or did not pay enough attention to remember it (68% of the cases). It is remarkable that 12 patients who *did not* believe in life after death saw apparitions (Table 4, Row g). This, of course, is too small a sample for detailed interaction analysis. We assumed that patients whose beliefs were weak or non-existent might have been more likely to neglect mentioning the matter to their physicians or nurses than would those who had strong convictions. We therefore contrasted this "no information" group with the believers.

Our analysis revealed that belief in an after-life has no significant influence on the frequency of the kind of apparition seen, though it did seem to influence the patient's ostensible communication with it. More patients in the "believers" group than those in the "no information" group experienced apparitions with a "take away" purpose and consented "to go" with them. This difference is significant in both the U.S. ($P = .05$) and the Indian ($P = .004$) sample. There was no such difference in Indian patients who did not consent "to go." (Since there was only one "non-consenter" in the American sample, this comparison could not be made.)

Belief in life after death did not significantly affect serenity and elation in the American patients, but it did increase such feelings at the expense of negative reactions in the Indian sample ($P = .005$). In both countries, belief strongly increased positive religious responses (U.S., $P = .004$; India, $P = .002$).

A number of other variables were ascertained and analyzed—among them the possibility of respondent bias, as mentioned above—but they are not discussed here due to lack of space. Reports on phenomena other than hallucinations of human figures were also collected and evaluated: visions of scenery, etc., mood elevation shortly before death, and experiences of patients who were near death but recovered. We hope to report on these elsewhere.

DISCUSSION

The American and Indian surveys were designed to replicate the findings of the pilot survey and to provide more detailed data bearing on the hypothesis of post-mortem survival. While the pilot survey unearthed many findings which were interpreted as being consistent with the after-life hypothesis, it had severe limitations concerning the statistical certainty of these findings. Because the pilot survey was the first of its kind, previous information was inadequate in helping to predict many of the trends which emerged in that study. Therefore the possibility that such unexpected trends were due to chance variations could not be ruled out. However, most trends in the present survey are reasonably consistent among themselves and with those of the pilot survey. This diminishes the probability of chance as an acceptable explanation.

Our model of deathbed experiences related to post-mortem survival assumes (a) that survival-oriented apparitions may to some extent be due to ESP of or from "another world" (e.g., deceased relatives or religious figures) or (b), if this is not the case, are entirely subjective. Therefore we hypothesized that medical factors which often cause hallucinations but which are not known to affect ESP will not increase the frequency of seeing after-life related apparitions. In all three surveys, the data conformed to this hypothesis. Furthermore, we postulated that medical conditions which impede sensory (and, we presume, extrasensory) contact with the external world also reduce the incidence of seeing after-life oriented hallucinations. This was confirmed.

We carefully considered psychological factors which might have caused hallucinations. Severe stress, especially in situations of drastically reduced social contact, can find release in hallucinations. Psychiatrists suggest that deathbed visions actually are schizoid episodes through which patients cope with very stressful situations by hallucinating pleasing fantasies of another world. A careful analysis of the data revealed no support for this counterhypothesis. Stress was not significantly related to the core phenomena of deathbed visions. In both the American and Indian samples, the trend went in the opposite direction: stress tended to reduce the survival-related aspects of these experiences. Patients' desires, wishes, and expectations also had no significant influence. In a large number of cases, patients experienced apparitions which appeared to be in opposition to their own motivations, though consistent with our hypothesis of post-mortem survival. Some psychiatrists have developed the concept of "latent motivation"—motivation which is not expressed verbally or exhibited in behavior. However, this concept has been severely criticized and generally rejected in scientific

research. We did not find any definite indices in our data of "latent motivation" with regard to the main phenomena of deathbed visions.

The most viable counterhypothesis is cultural conditioning. In childhood and youth, cultural beliefs are transmitted to us in various ways. Could they re-emerge in the visions of the dying—a kind of playing back of old records? The cross-cultural survey in India was primarily done with this question in view. Our model assumes that individual and cultural factors will completely shape deathbed visions, provided they are *caused* by these factors. However, if they are based on perception of some form of external reality, or ESP glimpses of "another world," we hypothesized that only modest differences between cultures would emerge, with the main features remaining the same. An analogy could be found by contrasting a typically American and a typically Indian painting of a mountain: the details would be quite different while the basic characteristics of a mountain would be clearly recognizable.

We found a very close agreement in all three surveys with regard to the frequencies of survival-related apparitions: dead and religious figures versus those of the living. The ostensible "take-away" purpose of the apparition was also equally present. Absence of influences by medical and psychological variables was indicated in all three samples. The core phenomena are the same.

Cultural coloring, however, was present. The sex of the hallucinatory figure was largely determined by culturally conditioned preferences which, in turn, seem to influence the proportion of hallucinations of dead and religious figures. Religion had a comparably slight influence on the main phenomena, though it did, of course, determine the naming of the religious figures. We interpret these modest cultural differences according to our model: they seem to support the hypothesis that deathbed visions are, in part, based on extrasensory perception of some form of external reality rather than having entirely subjective origins.

Each culture develops dominant attitudes or values concerning what is desirable and meritorious to say or do, and what is undesirable and degrading. In Western culture, talking about personal contact with the dead is often felt to be undesirable. In spite of the fact that 27% of an American sample studied by Greeley (1975) answered "yes" to the question "Have you ever felt that you were really in touch with someone who had died?" only rarely were such experiences told to professional people. In a British survey, Rees (1971) contacted 277 widows and 66 widowers in selected localities. Of this number, 94% were suitable for interview. Forty-seven percent of that sample reported hallucinations of the presence of a dead spouse. None of them discussed their experiences with their doctors, and only one out of 137 did so with a clergyman. The main reason for

not discussing the experience was fear of ridicule. It is likely that patients in our survey also had a negative response bias; that is, they avoided telling medical personnel about "seeing" apparitions of the dead. If this is so, our sample represents fewer survival-related apparitions than the number actually experienced.

Another possible way in which cultural conditioning could shape the data is through respondent bias. The medical observers might have reported what they believed they were supposed to, according to cultural norms, and left out what went against the grain of their particular culture. We found no serious distortion in favor of the after-life hypothesis. On the contrary, we detected some under-reporting of those phenomena which we hypothesize as being related to post-mortem survival.

Our data came from interviews with physicians and nurses, rather than with the patients themselves. This could introduce a source of bias in reporting and sampling. However, some studies by Moody and Kübler-Ross are based upon interviews with patients. In Moody's (1975) account of the experiences of resuscitated patients, he states that quite a few of these patients, while in a near-death state, became aware of the presence of deceased relatives as well as what we have called religious figures "who apparently were there to ease them through their transition to death" (p. 43). In a personal communication Kübler-Ross (1976) has on the basis of her experience with terminal patients confirmed the main characteristics of our own findings: a predominance of survival-related apparitions, their "take-away" purpose, and patients' reactions of serenity, peace, and religious emotion.

The issue of survival after death obviously cannot be assessed solely on the basis of experiences of dying patients. The entire range of other phenomena suggestive of an after-life—such as out-of-body experiences, reincarnation memories, apparitions collectively perceived, and certain kinds of mediumistic communications—have to be considered together with the various explanatory hypotheses (other than survival) that have been advanced (see, e.g., Hart, 1956, 1959; Murphy, 1961; Roll, 1974; E. M. Sidgwick, 1923; Stevenson, 1974a, 1974b, 1975; Tyrrell, 1953). Noyes (1972), Noyes and Kletti (1972, 1976), and Garfield (1975) have published surveys of cases which involve deathbed experiences characterized by altered states, panoramic memories, and also some phenomena similar to those covered in the present report, but without having ascribed to them an after-life interpretation. Discussion of the full range of data and theories related to the survival question does not fall into the scope of this paper.

We conclude our report on the cross-cultural survey of the experiences of dying patients by stating that the main findings are

consistent among the three surveys that have been conducted in the United States and in India over a 15-year period. The central tendencies of the data support the after-life hypothesis as it is formulated in the model we outlined briefly earlier in this paper.

REFERENCES

- BARRETT, W. F. *Death-Bed Visions*. London: Methuen, 1926.
- GARFIELD, C. Consciousness alteration and fear of death. *Journal of Transpersonal Psychology*, 1975, 7, 147-175.
- GREELEY, A. M. *Sociology of the Paranormal: A Reconnaissance*. Beverly Hills, Calif.: Sage Publications, 1975.
- HART, H. Six theories about apparitions. *Proceedings of the Society for Psychical Research*, 1956, 50, 153-239.
- HART, H. *The Enigma of Survival*. Springfield, Ill.: Charles C Thomas, 1959.
- HYSLOP, J. H. *Psychical Research and the Resurrection*. Boston: Small, Maynard, 1908.
- KÜBLER-ROSS, E. Personal communication, 1976.
- MOODY, R. A., JR. *Life After Life*. Atlanta: Mockingbird Books, 1975.
- MURPHY, G. *Challenge of Psychical Research*. New York: Harper & Row, 1961.
- MYERS, F. W. H. *Human Personality and its Survival of Bodily Death*. London: Longmans, Green, 1903, 2 vols.
- NOYES, R., JR. The experience of dying. *Psychiatry*, 1972, 35, 174-183.
- NOYES, R., JR., AND KLETTI, R. The experience of dying from falls. *Omega*, 1972, 3, 45-52.
- NOYES, R., JR., AND KLETTI, R. Depersonalization in the face of life-threatening danger: A description. *Psychiatry*, 1976, 39, 19-27.
- OSIS, K. *Deathbed Observations by Physicians and Nurses*. New York: Parapsychology Foundation, 1961.
- REES, W. D. The hallucinations of widows. *British Medical Journal*, 1971, 4, 37-41.
- ROLL, W. G. Survival research: Problems and possibilities. *Theta*, 1974, 39-40, 1-13.
- SIDGWICK, E. M. (MRS. H.). Phantasms of the living. . . *Proceedings of the Society for Psychical Research*, 1923, 33, 23-429.
- SIDGWICK, H., AND COMMITTEE. Report on the census of hallucinations. *Proceedings of the Society for Psychical Research*, 1894, 10, 25-422.
- SIEGEL, R. K., AND WEST, L. J. (EDS.). *Hallucinations: Behavior, Experience and Theory*. New York: Wiley, 1975.
- STEVENSON, I. *Twenty Cases Suggestive of Reincarnation*. (2nd ed., rev.) Charlottesville: University Press of Virginia, 1974. (a)

- STEVENSON, I. *Xenoglossy: A Review and Report of a Case*. Charlottesville: University Press of Virginia, 1974. (b)
- STEVENSON, I. *Cases of the Reincarnation Type. Volume I. Ten Cases in India*. Charlottesville: University Press of Virginia, 1975.
- TYRRELL, G. N. M. *Apparitions*. London: Duckworth, 1953.
- WEST, D. J. A mass observation questionnaire on hallucinations. *Journal of the Society for Psychical Research*, 1948, 34, 187-196.
- WEST, L. J. (ED.). *Hallucinations*. New York: Grune and Stratton, 1962.

A.S.P.R.
5 West 73rd Street
New York, N.Y. 10023

Department of Psychology
University of Iceland
Reykjavik, Iceland