11 Lucid Dreams

I was trying to get on a bus which I was chasing along the road, dodging in and out of traffic and holding a ribbon which connected me to the bus. This ribbon seemed to be elastic and I noticed with annoyance that it was elongating and I was falling behind. Then I realized I was dreaming and did not need to chase the bus or even to dodge the traffic. So I stopped running and stood still in the road—the traffic vanishing as I did so [49d p. 34]

This is how Green's subject *B.* described one of his many lucid dreams; that is, those dreams in which one knows it is a dream.

There are two reasons for associating lucid dreams with OBEs. First, as we have seen, many practised astral travellers also have lucid dreams. Second, as Green pointed out (49d) it is hard to know where to draw the line between an OBE and a lucid dream. In both the person seems to be perceiving a consistent world, but it is not seen through the physical eyes and may vary from an accurate representation of the physical world to something very bizarre. Also the subject, unlike in an ordinary dream, is well aware that he is in some altered state and able to comment on and even control it. Of course you could say that lucid dreams start from sleep and OBEs from waking, and perhaps the term lucid dream should be reserved for sleep, excluding the waking 'lucid dreams' described by Green and others. But even excluding these there are some lucid dreams in which the person seems to observe his own body lying in bed asleep, and this is like a typical OBE. It would certainly be possible to draw a line between the two experiences, but the important point to realize is that that line is not clear, and the two have much in common. So perhaps a brief study of lucid dreams may help us to understand the OBE.

Several authors have described their own study of their dreams. Among them are Mrs Arnold-Forster (3) Yves Delage (31) and P. D. Ouspensky (108). Ouspensky developed a technique of entering some-

thing like a dream when first falling asleep and maintaining consciousness as he did so. In this way he was able to observe the process. Dr Van Eeden (153) classified his own dreams into nine types including the lucid dream and as we have seen both Fox and Whiteman studied their own dreams. More recently Tart has described a type of dream he called the 'high dream' in which one dreams of being in an altered state of consciousness, although without necessarily realizing that it is a dream (146f).

Some writers have described the lucid dream as though it were in some way 'lower' than an OBE, and perhaps some kind of rough ordering can be established here. First there are certain kinds of 'ordinary dream' in which one only realizes it is dream on waking up, but which are said to be precursors of, or related to, lucid dreams. These include all sorts of falling, flying, and floating dreams. Then there are the 'false awakenings' including dreams of telling someone about the dream as though awake, and those in which one dreams of waking up. Third, between ordinary and lucid dreams, are those in which the dreamer considers that he might be dreaming, but for one reason or another does not conclude that he is. Then finally there are the fully lucid dreams, although it seems that many degrees of lucidity are possible.

Lucid dreams and flying dreams have often been associated. For Van Eeden, 'Flying or floating . . . is generally an indication that lucid dreams are coming.' In a book entitled *Studies in Dreams* Mrs Arnold-Forster described many flying dreams. She used to fly around the British Museum, or other public galleries, noticing the great distance between the ceiling and the tops of the doors, and having to descend when she wanted to pass into another room. When she glided about the streets she was worried that people would notice the odd way in which she moved and so she developed a special 'flying dress' which hid her feet from view. However, she was not usually aware, at the time, that she was dreaming.

Many people have thought that flying dreams represent actual flights of the astral body. In 1906 there was much discussion about the topic in the Annals of Psychical Science. Colonel Albert de Rochas (see 30), who had experienced this kind of dream for more than half a century, had written an article in a French magazine and obtained numerous accounts from his readers in response. A popular 'explanation' of the time appeared to be that the flying resulted from the sleeper's inability, while lying down, to place his feet

firmly on the ground. But de Rochas argued that on the contrary it resulted from astral flights.

De Vesme (30) took up the argument and suggested that if astral flights were really accomplished in these dreams then consistencies should be observed between them. Studying many reports he found that some people flew diagonally, and some vertically while others dropped from planet to planet. Some flapped their arms to move along while others floated on their backs, hopped, slid or swam as though in water. One learned to do without any such aids and moved by will power alone. De Vesme concluded that these dreams varied just as much as any other dreams and pointed out how much they differed from other psychic phenomena. He argued that they were not accompanied by any supernormal feats and concluded that they provided no evidence for the existence of the soul, or the flight of the astral body.

As well as flying dreams Muldoon and Carrington (97a) listed other 'projection dreams', the 'body and head-flapping dream', the 'head thumping dream' and the dream of moving towards a phantasmal object. They explained that within 'cord-activity range' the astral body can be thrown about by the action of the cord and this produces the odd sensations in the dream. The phantasmal object, they add, is one's own physical body towards which the cord inexorably draws the astral body.

Within the flying dreams they distinguished gliding, swimming, and bouncing as movements of the astral body, but I think one might just as well attribute them all to the freedom of the dream imagination. Perhaps their most interesting account is of the falling dream. As the astral returns to the body at the end of any dream (and they taught that all dreams involved projection) it drops as it nears the body and it is this which gives rise to the sensation of falling. This is why, they add, one always wakes before hitting the bottom of the cliff, tall building or whatever.

Actually, as some readers will know, this is not true. Nor is the 'old wives tale' that if you hit the bottom you are dead. I once dreamed that I was standing on the top of a cliff in a strong wind watching the waves crashing on the jagged rocks below. For some reason I fell and went spinning down and down, the rocks coming nearer and nearer. As I hit the rocks I bounced several times and my body broke apart into large chunks. When someone went for an ambulance somehow several arrived and each took away one of the

chunks, an arm going into one, a leg or two into another. I didn't seem to mind in the least.

Another kind of dream in which lucidity may or may not be present is the false awakening. Fox woke one night, or thought he woke, but everything seemed to be oddly strained, peculiarly lit, and he felt disinclined to move; only when he did try to move did the light disappear, and he woke up. It was during this state that he saw Elsie appearing to him, but when he called her name she vanished (44c).

One of Van Eeden's nine types of dream was the 'wrong waking up' which he described as 'demoniacal, uncanny, and very vivid and bright, with a sort of ominous sharpness and clearness,, a strong diabolical light [153]. Moreover the mind of the sleeper is aware that it is a dream, and a bad one, and he struggles to wake up.' Van Eeden thought that demons were responsible and found the terror of this sort of dream ended when the demons were seen and the state realized. But others who experience the false awakening do not describe it as terrifying and are not aware at the time that it is a dream.

Delage, for example, describes a series of repeated dreams in which he heard a knock at the door. Someone had come to ask him to attend to a friend who was ill. He got up and dressed and went to wash, whereupon the feeling of cold water on his face woke him up and he realized that he had dreamt it all. A little later he dreamt he heard the voice again, calling more urgently. Thinking he must have fallen asleep again he hurriedly got dressed and once more began to wash with the cold water which woke him. Altogether he dreamt and woke four times without ever actually leaving his bed.

Green gives an example of someone who dreamed of waking up and then on realizing it was a dream actually woke up (49d); but the realization that it is a dream need not end it. Fox believed that it was possible to step out of the body in this state and so begin an OBE. In fact he made use of any false awakening to do this..

We can see that false awakenings vary a great deal. They may be pleasant or terrifying, lucid or not, and can end in waking up, going on sleeping or a transition to an OBE. Common features, though, seem to be the tension or expectancy in the air and the scenery, which can be nearly normal but is often just that little bit wrong so that the dreamer notices something odd. In other words he may take the first step towards lucidity.

We may now ask just what it is which brings about lucidity. Why

do people sometimes realize they are dreaming? And why, indeed, do most of us, most nights, have the most strange and dream-like dreams, without ever recognizing them for what they are?

It has often been suggested that it is recognition of the oddness in a dream which leads to this realization. In one of my own lucid dreams I was about to drive away from a tall building when I realized I had forgotten something and rushed back to get it. As I ran up the stairs I had descended only a moment before I noticed that they were crumbling away from the wall and broken completely only a little way ahead of me. I wondered how they could have decayed so quickly and it was then that the answer came 'because it is a dream'.

Others have realized because they recognized a familiar dream motif. Hearne's (62a) subject A.W. realized he was dreaming once when he saw some old pieces of metal in the sea and tried to dig them up. He recognized the familiar wish-fulfilment situation which he often experienced in dreams and so realized he was dreaming and was able to examine his surroundings, the beach, sand and sea and to notice that the perspective did not seem to be quite accurate. Not everyone dreams of finding money, but the familiar event which is recognized can be anything at all, and in fact quite often it is flying which serves this purpose.

Green (49d) listed four dream events which can coincide with the onset of lucidity: emotional stress within the dream, recognition of incongruity, the initiation of analytical thought, and a recognition of the dream-like quality of the experience. She correctly pointed out that a cause and effect relationship is not established by the fact that lucidity coincides with these features, although I think the evidence for such a relationship is good.

According to Fox it is all a question of the different degrees of activity of the critical faculty (44c pp. 35-6). He asks us to imagine that he dreams of seeing a girl with four eyes. With little critical awareness he might merely notice that there was something odd about the lady, only realizing, as though it were a great revelation ... 'Suddenly I get it-"Why, of course, she had four eyes!".' With a little more critical ability he might go so far as to wonder why she had four eyes, and with more still, might conclude that there was a freak show or circus in town. Finally he might argue to himself that surely there never was such a freak, it is impossible. So ... 'I am dreaming'.

Many people get part of the way along this scale of critical awareness and it can be infuriating to wake up, remember a really crazy dream and wonder why on earth you did not realize it was a dream. Surely, you may ask, I cannot have been so stupid as to have believed all that was really happening, can I? The answer is that you could. For example, one night I dreamt I was showing an estate agent round my house with its forty bedrooms and palatial drawing rooms. I swept him down a vast landing and exclaimed 'here you see the blue room with four-poster bed, ensuite bathroom and views of the grounds . . .' Something in the back of my mind told me there was something wrong. Didn't my house usually have only two bedrooms? Had it changed overnight, or was it not my house at all? But why then should I be selling someone else's house? In spite of all this questioning I never arrived at the answer 'because it is a dream'.

Another aspect of this difficulty is that many people consider in their dreams that it might be a dream, but wrongly come to the conclusion that it is not. Green (49d) called this a pre-lucid dream. She gives another example from Delage, who was losing his sight but began to dream that he could see perfectly again. In a dream he would remember that he had been disappointed before by waking up and finding that he had only dreamt he could see again, and so he asked himself whether he might now be dreaming. In one such dream he asked his daughter-in-law to pinch him. He never considered that this too could be dreamed, and so when he felt the pinch he was convinced and very happy.

Not only can the dream mimic reality very closely, but the dreamer is very bad at recognizing the difference. In normal waking life we are constantly testing reality. In every act of perception we check everything we see or hear; if it does not seem to make sense we look again, or ask 'I beg your pardon? What did you say?' In dreaming, this reality testing is all but lost and we accept the most bizarre events without question. However, in the lucid dream some vestige of this function is restored, and some people have even learned to carry out quite complex tests in their dreams.

Ouspensky (see 49d) described a dream in which he was in a room with a small black kitten. He decided he would test whether he was asleep or not by commanding the .kitten to change into a large white dog. Sure enough the kitten became a large white dog, but simultaneously the wall opposite disappeared and a landscape appeared instead. Ouspensky then had to struggle to remember the most im-

portant thing '. . . that I am asleep and am conscious of myself, but he found himself being dragged backwards and finally awoke. So even here, when a test of lucidity had been successfully made, it was hard to maintain the state.

Others have made rather dangerous sounding tests in their dreams, as Fox did :

I dreamed that my wife and I awoke, got up, and dressed. On pulling up the blind, we made the amazing discovery that the row of houses opposite had vanished and in their place were bare fields. I said to my wife, 'This means I am dreaming, though everything seems so real and I feel perfectly awake. Those houses could not disappear in the night, and look at all that grass!' But though my wife was greatly puzzled, I could not convince her it was a dream. 'Well,' I continued, 'I am prepared to stand by my reason and put it to the test. I will jump out of the window, and I shall take no harm.'

Ruthlessly ignoring her pleading and objecting, I opened the window and climbed onto the sill. I then jumped, and floated gently down into the street. When my feet touched the pavement, I awoke. My wife had no memory of dreaming [44c p. 69].

In 1904 Van Eeden dreamed that he was standing in front of a table with various objects on it. Knowing it was a dream he considered what experiments he could make.

I began by trying to break glass, by beating it with a stone. I put a small tablet of glass on two stones and struck it with another stone. Yet it would not break. Then I took a fine claret-glass from the table and struck it with my fist, with all my might, at the same time reflecting how dangerous it would be to do this in waking life; yet the glass remained whole. But lo! when I looked at it again after some time, it "was broken.

It broke all right, but a little too late, like an actor who misses his cue. This gave me a very curious impression of being in a *fake-world,* cleverly imitated, but with small failures. I took the broken glass and threw it out of the window, in order to observe whether I could hear the *tinkling.* I heard the noise all right and I even saw two dogs run away from it quite naturally (153 p. 448).

Van Eeden then went on to taste some claret, finding it tasted quite like wine, and he thought what a good imitation this world of his dreams was.

Frederic Myers was also interested in comparing the dream world with the waking world and tried to find out all he could in his few lucid dreams. When he found himself in his study he noticed that

everything seemed blurred and evaded his direct gaze. Looking at the stair carpet he tried to determine whether he could visualize better than in normal life and found that it was not so 'the dream-carpet was not like what I knew it in truth to be; rather it was a thin, ragged carpet, apparently generalized from memories of seaside lodgings' (99a pp. 241-2). It is these observations of lucid dreamers which provide almost all we know about the scenery of the lucid dream.

I have explained how hard it is to become lucid in a dream and you may now be wondering how it can be done. The answer 'with difficulty' is not very helpful, although certainly true. Myers exclaimed that he had spent a lifetime of painstaking effort trying and only ever managed three lucid dreams in nearly 3,000 nights (99a). However some of us can expect to learn more easily than did Myers. " The first thing is to learn to remember dreams. Some people can do this easily, and usually do recall their dreams on waking. For those who do not it takes time, but it is only necessary to have a pen and paper by the bed and very conscientiously to write down even the slightest scraps recalled. A trick suggested by Brennan is to visualize the rising sun on waking (14), and another is to try to reconstruct in your memory the very first moments of waking, assuming the same position and relaxation. After some days recall should improve and for most people it takes only a few weeks before there is so much to write down that it becomes a chore. By this stage the writing can be dispensed with.

Once recall is good there are many techniques for achieving lucidity. Since many lucid dreams are initiated when the dreamer observes some incongruity in the dream it is possible to pay special attention to just those details, and to note in the morning that you were flying, speaking foreign languages or travelling incredibly fast. When other methods had failed I began to do this and after a while began to have dreams in which I seemed to be *nearly* there. I once dreamed I shot several of my colleagues and when they did not die I began to wonder why. I seemed on the verge of realizing, but I never did and the dream carried on.

About two years after that I had my first lucid dream. I was going up a ski-lift at dawn. All around I could see beautiful mountain scenery, lit by an orange glow. As the sun came up I could see the colours reflected in the snow. At the top of the lift I was about to get off onto the snow when I realized I had no skis on. I wouldn't be

able to get off the lift. Just then I thought, This is daft, what am I doing on a ski-lift without skis, and anyway lifts don't run at this time of the morning, in the dark.' All at once I realized the only solution, it must be a dream. For an instant everything was wonderfully clear; the mountains all around, the crisp clean air. I felt as though I could fly off the mountain. But in fact I ran across the snow and the lucidity passed as quickly as it had come and I went on with the dream.

I think it is interesting to note that in one dream I was on a ski-lift, and in another climbing a staircase. There seems to be some flying element in both of them, as there has been in many other people's lucid dreams. But I should point out that having one lucid dream is no sign that suddenly they are easy. It was many months before I had another one that was only slightly longer.

Muldoon (97a) suggested the 'dream control' method of inducing astral projection. He advocated that before going to sleep every night you should practice holding onto consciousness until you are able to get well into the hypnagogic state before losing consciousness. Then, he suggested, you should concoct a dream plot for yourself which will mimic the actions of the astral body in projection. Muldoon himself used the image of rising in an elevator, lying on his back. When it reached the top storey he got up and walked out. Alternatively, he said, you can make yourself dream of floating or rising in water or climbing a ladder. The difficulty is obtaining and maintaining consciousness, but if this can be achieved projection in the dream can be conscious.

This information on lucid dreams can be supplemented through surveys. Hearne (62a) gave a questionnaire to 48 students who reported lucid dreams and found that a typical lucid dream occurs after 5.0 A.M., seems to last a few minutes only, and is more vivid and with brighter colours than an ordinary dream. Thinking was reported to be clearer than in ordinary dreams and as clear as in waking. Most of Hearne's respondents had not flown in their lucid dreams, nor experimented in them, but he thought this might be because they were all rather young. Obviously more studies of this kind would be very useful.

Just as in the case of OBEs, surveys can tell us how common lucid dreams are and who has them. In fact there is even less evidence here than for OBEs but the major surveys of 'psychic experiences' have usually asked about lucid dreams too.

Green (49a) found that 73% of a student sample answered 'yes' to the question, 'Have you ever had a dream in which you were aware that you were dreaming?', although some of these seem not to have been genuine lucid dreams. Palmer found that 56% of the townspeople and 71% of the students in his sample reported that they had had lucid dreams and many of these claimed to have them regularly (HOd). Similarly, 70% of Kohr's respondents claimed lucid dreams (74).

In my own surveys 79% of the Surrey students said that they had them, and most claimed to have had more than one. A similar result was obtained from the Bristol students. Seventy-two per cent reported lucid dreams, with most claiming multiple experiences, and three even said that they could induce one at will. All these surveys seem to agree quite closely, showing that the lucid dream is a rather common experience - far more common than the OBE.

If there-really is a close similarity between OBEs and lucid dreams then we might expect the same people to report both. Surveys can answer this, and the answer seems to be 'yes'. Palmer (HOd) found significant relationships between OBEs and reporting 'vivid dreams', carrying out some sort of dream analysis, and lucid dreams, but he found no relationship between OBEs and frequency of dream recall. Kohr (74) found almost exactly the same except that in his survey frequency of dream recall was correlated with OBEs.

In my surveys I found very similar relationships. Amongst the Surrey students, lucid dreams and OBEs were reported by the same people. In fact every OBEer had also had lucid dreams. But here I found no relationship to dream recall or vividness. Among the Bristol students similar results were obtained, but I also asked them about flying dreams. This was most interesting because 50% reported having had at least one flying dream and it was the same people who reported flying dreams and lucid dreams. All this seems to confirm ideas which were previously just part of astral projection lore, that there is a strong relationship between special kinds of dream and the OBE.

There are other questions which can only be answered by experiment. One concerns whether the lucid dream is in fact a dream at all. Some have suggested that it is a form of hypnagogic or hypnopompic imagery rather than a true dream, that is, that it occurs before sleep or when just waking up, rather than during a dream itself. For a long time it was thought impossible to test this question;

but recently a way has been found by Keith Hearne at Liverpool University. To understand it, we need to learn a little about the physiology of sleep.

In the 1950s, when electroencephalograph (EEO) records were taken of subjects sleeping in the laboratory, it was shown that nearly everyone shows similar physiological changes during sleep *(see* e.g. 79, 84). In the drowsy state before falling asleep the EEG is characterized by many alpha waves (brain waves are labelled alpha, beta, etc., according to frequency. Alpha is between 8 and 13 cp.sec) and the muscles start to relax. Gradually this state gives way to Stage 1 sleep and three more stages follow, each having different EEG patterns and deeper relaxation. By Stage 4 the sleeper is very relaxed, his breathing is slower, and skin resistance high. He is very hard to wake up. If he is woken up, then he may say that he was thinking about something, he may describe some vague imagery, but he will rarely recount anything which sounds like a typical dream.

But this is not all there is to sleep - increasing oblivion. In a normal night's sleep a distinct change takes place an hour or two after first falling asleep. Although the muscles are still relaxed, the sleeper may move and from the EEG it appears that he is going to wake up and is back in something resembling Stage I sleep. Yet he will still be very hard to wake up, and in this sense is fast asleep for this reason this stage is sometimes called paradoxical sleep. The most distinctive feature, however, is the rapid eye movements, or REMs and the stage is also called REM-slee'p. In earlier stages the eyes may roll about slowly, now, however, they dart about as though watching something. If woken up now the sleeper will usually report that he was dreaming.

In a typical night's sleep there are four or five complete cycles through the different stages of sleep, with four or five REM periods. When the sleeper finally wakes up he may remember just the last of his dreams, or none at all; but as almost everyone shows a similar pattern it is assumed that everyone dreams, even if he never remembers doing so. Since many animals show REM sleep, it can be assumed that they, too, dream. Dreams seem to take time; and there is evidence that estimates of the time passed in dreaming can be reasonably accurate.

All this is relevant here because it makes it possible to determine

whether lucid dreams take place in the same state as ordinary dreams, and whether they are preceded or accompanied by any physiological changes. There is no known way to determine whether a subject is lucid by looking at the EEG record, but it might be possible to find out if he could signal in any way during the dream. The problem with this is that most of the muscles are relaxed, to the point of paralysis, during dreaming sleep; even if a person in a lucid dream tried to wave his arm or shout he probably could not. To get round this problem Hearne had the ingenious idea that since the eyes move (in REMs), the subject might be able to move them voluntarily, as well (62a).

Hearne was lucky enough to have a subject who had lucid dreams fairly often and who was willing to experiment, and to spend many nights in a sleep laboratory. He was therefore asked to move his eyes left and right eight times in succession if ever he found himself having a lucid dream. This worked: Hearne was able to detect extreme eye movements on his sleep laboratory polygraph, and to determine in which stage of sleep they occurred. The answer was unambiguous. All the lucid dreams occurred in definite REM sleep. In other words they were, in this sense, true dreams.

With this method Hearne was able to learn other things about this subject's lucid dreams. A typical one lasted between two and five minutes, occurred at about 6.30 A.M., about 24 minutes into a REM period and towards the end of a 22-second REM burst. It was also associated with higher than normal heart rate, although the reason for this was not clear. The nights on which lucid dreams occurred did not show a different sleep pattern from other nights, although they did tend to follow days of above average stimulation.

Hearne also tried using other methods of communication. The subject was given a button, taped to his hand, to press, was asked to shout out when he became lucid, and later was asked to alter his breathing rate. The first two of these were failures. The subject felt something in his hand during the dream, thought he had pressed the button, and even heard the click as he pressed it; but to the experimenter there was no movement and no button-press. The subject also thought he had shouted so loud that he would bring the experimenter running, but Hearne heard nothing. This confirmed what was expected: that the paralysed muscles could not be used; and it also bears an interesting parallel to those many failed attempts to move physical objects reported in OBEs. Could it be

that they arise from the same cause? The change of respiration fate, however, did prove successful; and Hearne concluded that this would be a useful way of communicating from lucid dreams.

His attempts at communication did not stop there. He hoped to establish a two-way communication between the dreamer and the experimenter. To this end he presented smells to the dreaming subject, and whispered numbers in his ears; but the results were inconclusive.

All these results depended on a single subject. Although Hearne found many subjects who claimed to have lucid dreams regularly,, when he brought them into the lab for a night the number of lucid dreams was far less than expected from their claims. Nonetheless he did manage to 'catch' one other lucid dream in another subject, and she was also able to signal using eye movements. So it appeared that this technique could be useful if only more lucid dreamers were available for experiments.

To obtain more subjects, Hearne hoped to be,able to induce lucidity. He tried squirting water at their faces during dreams, a method which had been used earlier as a stimulus for incorporation into dreaming, and this happened here too. The subjects dreamed of peeing cats and spitting friends, of sea spray and splashes from a baby's bath. But they did not become aware that they were dreaming. Stimulating the wrist with a mild electric shock proved no more successful. So it seems that it is rather difficult to induce lucidity in this way.

One last experiment deserves mention. There have been a few claims of ESP in lucid dreams. Green gives some examples, and we have already heard about Fox's dream in which he 'read' exam papers he was to take. Van Eeden also claimed that in some lucid dreams he was able to see precognitively. Hearne tried to test for ESP by telling his subject that he would look at a number during the dream (62a, b). When a lucid dream was signalled he picked a number from random number tables. Sure enough the subject saw numbers, on houses or gates, or in some way incorporated into his dream, but they were never the right numbers. Still, these and other experiments could be greatly extended using the method that Hearne developed, and it is to be hoped that it will lead to much better understanding of the lucid dream.

We may now ask just what all this information about,the lucid dream can tell us about OBEs. First of all, I think it is most import-

ant that the similarities are noted. In both, the person seems to have his waking consciousness, or something close to it. He is able to see clearly, but what he sees is not quite like the physical and appears to have many of the properties of a dream world or imaginary world. He may carry out actions, such as shouting or moving objects, in which he seems to succeed, but in which, in physical terms, he has not.

In the case of the lucid dream the most obvious interpretation is that the person is dreaming and the dream world is created entirely by his own imagination; its contents are the contents of his own memory and he has made the dream world for himself. The only difference between the lucid dream and ordinary dream may lie in the state of consciousness and not in its contents. If this is an obvious model, it also has exciting possibilities; for we know little about changes of states of consciousness, and here is one readily available to all which requires no drugs, hypnotists, or special paraphernalia. All it needs is a good deal of patience and practice. The study of this particular state of consciousness, I believe, could teach us useful things about states of consciousness in general.

But what about the OBE? The important question is whether the OBEer is observing the same world as the lucid dreamer. Are the two experiences essentially aspects of the same phenomenon? Ts the world seen in both a product of the imagination? Or is the OBE something entirely different and an experience in which the physical world, or some shared 'astral world', is seen? Or perhaps the model outlined above is quite wrong, and both are experiences in which an astral body is projected?

Although I am trying to retain an open mind, I must say that the former explanation has some advantages. An account of the lucid dream in terms of imagination and normal dream processes is both attractive and simple; and the two experiences, lucid dreams and OBEs, do seem to have much in common. It would be hard to draw a firm line between them. However, one crucial piece of information we do not yet have is what physiological state is associated with the OBE. If we knew that we should have a better idea of its relationship to the lucid dream. I shall therefore turn next to studies of the physiology of the OBE.

12 The Physiology of the OBE

In a letter to the SPR Journal in 1976 the distinguished Cambridge physiologist, William Rushton, expressed his astonishment that the OBE should be taken so seriously. 'We are simply given the unsupported memory of an "experience" of rather a strange kind', he declared. 'This seems to stand on exactly the same footing as a remembered dream . . . What I do not know is why that dream should be thought of more interest than any other' (127). Rushton was posing an important question: is the OBE a kind of dream?

Can we now answer him? Clearly there are similarities between OBEs and dreams. In both we experience a world in which imagination plays a great part and we can perform feats not possible in everyday life. But the OBE differs in many important and obvious ways from what we have called an ordinary dream. For a start, it usually occurs when the subject is awake, or at least if drowsy or drugged, not sleeping. Second, the imagery and activities of an OBE are usually much less bizarre and more coherent than those of an ordinary dream, and most often the scenery is something from the normal environment rather than the peculiar settings of dreams. Third, OBEers are often adamant that their experience was nothing like a dream. 'It was so real, so vivid,' they explain; and as we rely on most people to differentiate dreams from waking life most of the time, this emphatic claim must count for something. Finally, there is the great difference in the staie of consciousness. Ordinary dreams are characterized by very cloudy consciousness at best, and are only recognized as dreams on waking up.

But these differences are not enough. You may argue that in a lucid dream both the imagery and the state of consciousness are much more like those in an OBE. So perhaps the OBE is a kind of lucid dream occurring in the midst of waking life. Those who have had an OBE may still protest that it does not feel that way, but perhaps they are mistaken. It could be that a dream supervening suddenly

in the midst of waking would seem terribly real; many adepts, after all, have found the OBE and lucid dream similar, as we have already seen. So how can we tell whether the OBE is a kind of dream?

One way to find out might be to determine the physiological state in which the OBE takes place. As we have seen, the lucid dream appears to be a true dream, occurring in REM sleep. If the OBE also took place in REM sleep then we should have some justification for calling it a dream and declaring that those who argue otherwise are mistaken. On the other hand, if it takes place in waking or some other state, then it would be stretching the term 'dream' unduly far to say that the OBE is a dream, even though it has important differences and occurs in a different state.

This is not the only reason for wanting to know what physiological state accompanies the OBE. As we have seen, there are many who believe that it is the astral body and not the brain which is responsible for consciousness and even thought. If this were so, and the astral body were separated from the physical, we might expect to find obvious changes in brain activity during an OBE. At the extreme we might expect all cortical activity to cease on the departure of the astral body. Other measures are of interest too. Is the OfiEer relaxed or tense during the experience? Is he responsive to things going on around him, and is his body quite passive? We might look for signs of fear or excitement, and all these could help us understand the OBE better.

More generally we may wish to know whether the OBE occurs in a discrete and clearly identifiable state, or whether it can occur, as for example can daydreams, in a normal drowsy, or waking state. If there were a special OBE state we would then have a better means of defining the phenomenon, and a means of testing whether a given person was in fact having an OBE. In other words we could check claims of OBEs. We would also be able to tell when an OBE started and stopped, how long it lasted, and so on. In fact we could do for the OBE what has been made possible for dreaming by the identification of REM sleep. The usefulness of all this is obvious. On the other hand there might be no discrete OBE state. This can only be found out by laboratory experiment; but first we need to catch an OBE in the laboratory.

This is not so easy. As we have seen, most people who have an OBE have only one, or at most a few, in a lifetime. And these are unexpected, uncalled for, and seem to occur in a bewildering variety

of situations. To capture an OBE in the laboratory needs a special kind of subject; one who is both able to induce an OBE at will, and willing to be subjected to the stress of being tested under these conditions. He will be required to produce the experience on demand, and to indicate when it starts and stops; and he will need to be fixed up with electrodes on the scalp, hands and face, and connected to a battery of instruments.

Fortunately there are such subjects. One of the first to be tested was a young girl called Miss- Z., by Charles Tart who studied her OBEs (146b). Miss Z. was in her early twenties and had had two years of college education. According to Tart she had had a difficult childhood, had suffered from numerous psychological problems, and had been in a psychiatric hospital for a few weeks about a year before the experiments began. Her OBEls all occurred at night. She used to wake up in the night and find herself floating near the ceiling, where she would remain for a few seconds or sometimes as much as half a minute. She only rarely experienced anything further, or tried to travel away from the bed and her room. Apparently she thought these kind of experiences were quite ordinary until she mentioned them to some teenage friends; as they ridiculed her, she stopped talking about them.

With Miss Z. as subject Tart initially wanted to test two aspects of the OBE; first, whether ESP could occur during an OBE, and second what was the physiological state associated with the experience. Since Miss Z.'s OBEs all occurred at night she was invited to come to Tart's sleep laboratory, and to spend several nights there under observation. Two rooms were used. In one Miss Z. slept, on a comfortable bed, and in the other Tart spent the night watching the output of the recording instruments, and listening, via an intercom, to anything the subject said. She was asked to try to have OBEs, and if she succeeded to tell Tart so that he could mark the time on the charts monitoring her physiological activity. Miss Z. spent altogether four non-consecutive nights sleeping at the lab.

The charts recorded a variety of features. First there was the electroencephalogram, Silver disk electrodes were attached to the girl's scalp and the EEG recorded continuously through the night on a polygraph. This is an instrument for recording several variables at once, the output from the scalp electrodes being amplified and fed to pens which move up and down across a moving sheet of paper, producing a wavy tracing of the changes in potential. As,, well .as.

EEG, the polygraph recorded eye movements from miniature strain gauges taped over the right eyelid, and basal skin resistance from an electrode on the palm of the right hand. From this same electrode the GSR, or galvanic skin response, was also measured. (When somebody attends to any startling stimulus, such as a loud noise or something emotionally important, a change takes place in the skin of the hand. Slight sweating changes the resistance briefly, and this can be recorded as the GSR - the principle used in the 'lie detector'.)

Heart rate and digital blood volume were also measured, with a finger photoplethysmograph. Obviously it is interesting to know about the heart rate since it tends to fall during sleep and rise whenever the subject is more aroused or alert. But as there were problems with this apparatus it was only used on two of the four nights.

On her first night in the laboratory Miss Z. fell asleep. Within half an hour she had reached Stage 4 sleep and during the night she had three REM periods. An odd feature of the record was that she had rapid eye movements (REMs) during the Stage 1 period on first falling asleep. This is very rare indeed, but Tart suggested that it might be associated with the very vivid imagery which Miss Z. reported having before falling asleep. During this first night she had no OBEs.

During the second night Miss Z. woke twice in the night and reported that she had been floating above her body, and on one occasion she had floated in and out four or five times in the preceding five minutes. During the first one Miss Z. had not yet fallen asleep and the EEG showed a drowsy waking pattern followed by waking when she told Tart about the experience. All the time the heart rate had been steady and there were no REMs. Then at 3.15 a.m. Miss Z. woke up and called out 'write down 3.13'. Apparently she had left her body and lifted up high enough to see the clock on the wall. At that time the EEG showed various patterns but predominantly theta and alphoid activity (a pattern similar to but slower than waking alpha). There were few sleep spindles (a feature of the EEG pattern in certain stages of sleep), no REMs, no GSRs and a steady heartbeat. On the final occasion, when several brief OBEs were reported the EEG could not be classified as either a sleep or waking pattern. (Examples of these patterns are shown on Plate 7.)

On the third night Miss Z. had a dramatic OBE. She seemed to be flying and found herself at her home in Southern California, with

her sister. Her sister got up from the rocking chair where she had been sitting and the two of them communicated without speaking. After a while they both walked into the bedroom and saw the sister's body lying in bed asleep. Almost as soon as she realized that it was time to go, the OBE was over and Miss Z. found herself back in the laboratory.

Tart was not able to contact the sister to check whether she had been aware of the visit, but the physiological record showed that there was mostly alphoid activity with no REMs and only a couple of minutes of Stage 1, dreaming sleep, with REMs.

The last night was in some ways the most exciting, for on that occasion the subject was able to see an ESP target provided (more of this in Chapter 18); but the EEG record was obscured by a lot of interference. Tart described it as somewhat like Stage 1 with REMs, but he added that he could not be sure whether it was a Stage 1 or a waking pattern.

Amongst all these confusing and changeable patterns, some certainty does emerge. In general the EEG showed a pattern most like poorly developed Stage 1 mixed with brief periods of wakefulness. This makes sense since Miss Z. always woke up to report the OBEs. This EEG activity was flattened, was associated with a steady heart rate, no REMs and no obvious changes in GSR or basal skin resistance. All this amounts to saying that Miss Z. was not dreaming when she had her OBEs, or, more accurately, she was not in Stage REM sleep. For this subject at least OBEs do not occur in the same state as. dreaming. Tart would have liked to continue working with Miss Z. but this proved impossible as she had to return to Southern California.

However, Tart (146a) was able to work with another subject, Robert Monroe, well known from his book *Journeys Out of the Body.* Monroe was monitored for nine sessions with EEG and other devices, but as his OBEs do not occur during sleep it was not necessary for him to spend whole nights in the lab, except on one occasion to test his sleep patterns. Normally he would arrive in the evening and stay for a few hours, reclining on a cot in the experimental room while observed by Tart, or an assistant, through a window in the observation room.

In this environment Monroe had difficulty inducing an OBE. Electrodes were clipped to his ear, and he found them very uncomfortable. During all the time that he was trying to have an OBE his

EEG showed a strange mixture of patterns. There was unusually varied alpha rhythm, variable sleep spindles, and high voltage theta waves. Since there was no delta at all no Stage 3 or 4 could be identified. On the whole Tart concluded that Monroe was in Stages 1 and 2 and was relaxed and drowsy, falling in and out of sleep. For comparison Monroe spent a night in the laboratory and Tart found that his sleep pattern was quite normal, with the exception of the features already noted; that is, he showed no delta waves and his sleep spindles varied in frequency. He had normal dream periods and sleep cycle.

During the penultimate session Monroe managed to have an OBE. He had been relaxing and trying to numb his painful ear when he seemed to be observing a woman seated on a couch talking to two men. He tried to draw their attention, pinching the woman gently, but got no response and so returned. Very soon he 'rolled out' again and this time stayed in the vicinity of the room and went to find the technician who was in charge of the apparatus. After returning to his body he awoke and called the technician to tell her all about the man he had seen her with, who turned out to have been her husband.

It was rather difficult to match up this long, two-part OBE to the EEG record. But as far as he could tell Tart concluded that there was a long period of alpha and Stage 1 sleep, then some Stage 2 sleep, Stage 1 with REMs, a brief awakening for 40 seconds and then three more minutes of Stage 1 with REMs before the final waking up. It seemed that the two OBEs coincided with the Stage 1 periods.

Tart concluded that Monroe's OBEs occurred in the-dreaming state; but this presented him with a problem. Monroe claims that for him, dreaming and OBEs are entirely different; he had had dreams in his night session, too, yet reported no OBEs. Tart finally concluded that perhaps the OBEs were a mixture of dreams and 'something else'. This 'something else' might, he thought, be ESP.

Does this evidence suggest that the OBE is, after all, a kind of dream? I think not, for it is quite possible that Monroe was in Stage 1 sleep rather than Stage REM when he had his OBEs. The differences between these two lie in a very slightly different EEG pattern, in the fact that Stage 1 occurs on first falling asleep and REM usually after a period of deeper sleep, and, of course, in the presence of REMs. Monroe entered this OBE state'on one occasion from Stage 2 sleep and on the other from a brief period of waking. This is just what we should expect if he were drowsy or lightly asleep and the

OBEs occurred in Stage 1. If it were Stage REM we might'expect some deeper sleep to have occurred first. The fact that Monroe does not show normal Stages 3 and 4 complicates the issue. So essentially it seems that the only feature on which we can decide is the REMs, and Tart gives no details of these. So we cannot be sure whether Monroe was in light sleep and showing the slower eye movements of this stage, or in the (unlikely) REM sleep with true REMs.

It may have been true REM sleep, but if we assume for the moment that my arguments are valid and that he was in Stage 1 sleep, then Monroe would be right that his dreams and OBEs are very different. The OBEs would be occurring in that borderline state between sleeping and waking in which many of us experience vivid hypnagogic images, visions and sounds, and in which the imagination seems to be let loose. If it is in this stage that the OBE occurs, we can say that it is not a dream, and this would confirm the findings with Miss *Z.* But obviously, in view of all these arguments and problems, more information is needed from other subjects and other laboratories.

One of the next subjects to be tested in this way was Ingo Swann. Swann, who added his second 'n' on the advice of a numerologist, is a painter living in New York City. He paints vast starscapes inspired by his OB trips through the galaxy. His first OBE occurred when he was only three and was given an anaesthetic for a tonsillectomy. After that the experiences occurred spontaneously but it was only much later, after college, three years in the army and starting to paint, that Swann taught himself to control his OBEs and to have them at will (8a, 144).

One day Swann turned up at the American SPR and told Janet Mitchell that he could ' "exteriorise" from his body anywhere, anytime, although he couldn't always "see" perfectly' (92). Quite what Swann means by 'exteriorise' is not obvious. He has, for example, denied that he can have OBEs (8a) but on the other hand does agree that his consciousness separates from his physical body. In any case he has taken part in experiments similar to those with other OBEers.

In several experiments at the ASPR (106) Swann was attached to the EEG while he sat in a darkened room and tried to exteriorise, in his own time, and travel to a distant room where ESP targets were set up. He did not fall asleep, unlike the previous subjects, and was able to make comments about how he was getting on, through an intercom. He also had a button which he pressed on his return and

this marked the EEG record so that the precise time of the OBE was recorded.

After some months of this type of experiment Swann suggested that he might be able to leave his body on command and so Mitchell arranged to give him an audible signal to tell him when to go, and when to return. Apparently he succeeded; and this meant that OBE and other times could easily be determined and compared. During the OBE periods the EEG was markedly flattened and there were frequency changes, with a decrease in alpha and increase in beta activity. While these changes took place the heart rate stayed normal.

These findings are rather different from those with the previous subjects in that Swann seemed to be more alert during his OBEs, while the other subjects were in a drowsy or sleeping state; but perhaps this just confirms what was learned from case studies, that the OBE can occur in a variety of states. In addition to this difference, there were similarities. Both Swann and Miss Z. showed flattened EEGs, and neither showed change in heart rate. But perhaps most important is that in no case so far did there seem to be a discrete state in which the OBE took place. There were no sudden changes in either EEG or autonomic functions to mark the beginning or end of the OBE. Any changes were gradual; unlike dreaming, the OBE does not seem to be associated with a discrete physiological state.

There is one other subject who has taken part in a large number of OBE experiments, including those measuring physiological variables, and that is Blue Harary. Stuart Blue Harary, once introduced to me as 'Mr Astral Projection', was born in New York in 1953 and had psychic experiences from an early age. When he was six he claims to have discovered discarnate friends, who not only showed him how to see things in a different way, but gave him information about family affairs which he could not have known about (8d). His first OBE occurred when he was fourteen, and was not pleasant. Lying in bed one night he found himself floating above his body, but he was not alone. Hovering beside him was a dark and menacing shape; just a silhouette. Terrified he grabbed the light and with a jolt was back in his body, but although he could no longer see the creature, he felt it was still there and the experience scared him for some time. Later he began to have more OBEs. These were less frightening, but he kept them a secret from his family and friends, as do so many OBEers.

In 1971, when he was an undergraduate Harary decided to visit

the American Society for Psychical Research in New York City. There he met Janet Mitchell who was involved in OBE work at the time. When he returned some months later he also met Karlis Osis, research fellow at the Society, who had begun a project for testing people who claimed to be able to 'go OB' at will (103e). Osis invited him to take part in these tests and he seemed to do well, travelling to a distant room and reporting with some accuracy what he saw there.

Since then Blue Harary has taken part in numerous OBE experiments, not only as subject, but as experimenter as well. He transferred to Duke University so that he could become more involved in the parapsychological work going on in Durham and since then has been that rare kind of researcher, one who experiences for himself the phenomena on which he is working.

Harary has described his own experiences as very varied (59). Sometimes everything seems close to normal 'consensus reality', at other times it is utterly different, and his experiences can range along the continuum through everything in between. His 'other body' varies, too. He may feel himself to be a 'ball of light floating in space, a body-shaped form, or simply a point of awareness that either focuses on a particular area or merges, to varying degrees, with the surrounding environment' (59 p. 261). Sometimes he is aware of experiencing two locations at once. Some experiences are easy to recall and others forgotten, and sometimes the experience seems so real that he is not immediately aware of the fact that it is an OBE. One interesting detail is that Harary states that the ball of light varies in hue, intensity and colour. It sounds very much like the descriptions given by the Rigo people of Papua New Guinea. Harary's ball of light has apparently even been seen by a friend whom he tried to visit in an OBE. It is no wonder that with this variety of experiences his control over them and his articulate descriptions of them, Blue Harary has proved an excellent subject for OBE research.

The experiments in which his physiological state was measured were carried out at the Psychical Research Foundation. The PRF was founded expressly to study those phenomena which seem to indicate survival of some part of a person after the death of his physical body, and was research assistant at the PRF, where he took part in many OBE. In 1973-1974 Harary studied psychology at Duke University and was research assistant at the PRF, where he took part in many

experiments (61, 68, 95, 96). These took place usually at night. Harary prepared himself by carefully relaxing all day and avoiding anything which might produce distracting thoughts in the evening's session. An hour before the session he sometimes meditated for a few minutes and so came to the experiment calm and relaxed. While the electrodes were attached he would 'cool down' further using progressive relaxation and imagining the target room in preparation for his visit there. In this way he would reach a state in which it was sometimes hard for him to avoid having an OBE. When all was ready he was left in a completely dark, soundproofed room, with white noise in the background to cut out any distracting noises (see Plate 8).

Physiological measurements were made for 13 sessions, including EEG, eye movements, muscle activity (with electrodes on the chin), skin potential, heart rate and blood pulse amplitude, and finally respiration rate. All were recorded on a 12-channel polygraph along with timing and event markers and the whole period was divided into 30-second epochs for analysis. In each session Harary was asked to go OB twice. Before each of these OBEs he would 'cool down' for some time and then when he was ready would indicate that he was going, by voice. At the end of the OBE, usually after 2-3 minutes, he would say that he was back. Later the same procedure was repeated and so there were four periods altogether, two 'cool down' and two OBE. By this comparison it was possible to see whether the OBE occurred in a state markedly different from that of the 'cool down' period.

The findings were different again from those of previous studies. Here there were no changes in EEG. The amount and frequency of alpha were the same in OBE and 'cool down' periods and there were only slightly fewer eye movements in the OBE phases. These measurements alone show that Harary was awake and that his OBEs did not occur in a sleeping, dreaming or borderline state.

Other measures did show a change. Skin potential fell, indicating greater relaxation, and it was this measure which provided the best indicator that an OBE had begun. Both heart rate and respiration rate increased. This is surprising because it implies a greater degree of arousal; the opposite of the finding from skin potential. So in some ways Harary was more relaxed, but he was also more alert. However, this may not seem so surprising when we consider the relaxed but

alert state which is often advocated for learning to have OBEs. Finally the other measures, from the plethysmograph and electromyograph, showed no change.

What do all these findings mean? What they seem to show is that Harary's OBEs occur when he is in a state only slightly different from the previous 'cool down' state. He is more relaxed, and his breathing and heartbeat are faster; but although these changes are consistent across the different OBE periods, they are all gradual. There is no sudden change at the beginning or end of an OBE. This state does not appear much like dreaming, as was confirmed when an all-night session showed that Harary had a normal sleep cycle with REM periods. So Harary's OBE does not take place in the same physiological state as do his dreams, any more than do the other subject's OBEs.

We had two main objectives in considering these physiological studies: to find out whether there is a discrete OBE state, differentiable from other states, and if so what it is like; and to determine whether the OBE can be considered as a kind of dream. Both can now be answered. As for the first, great differences between subjects tend to obscure any clear pattern in the states, but in all this confusion it is clear that the start of an OBE does not coincide with any abrupt physiological change. There is no discrete OBE state. When we consider all the variety of everyday situations in which OBEs have been reported this should perhaps come as no surprise.

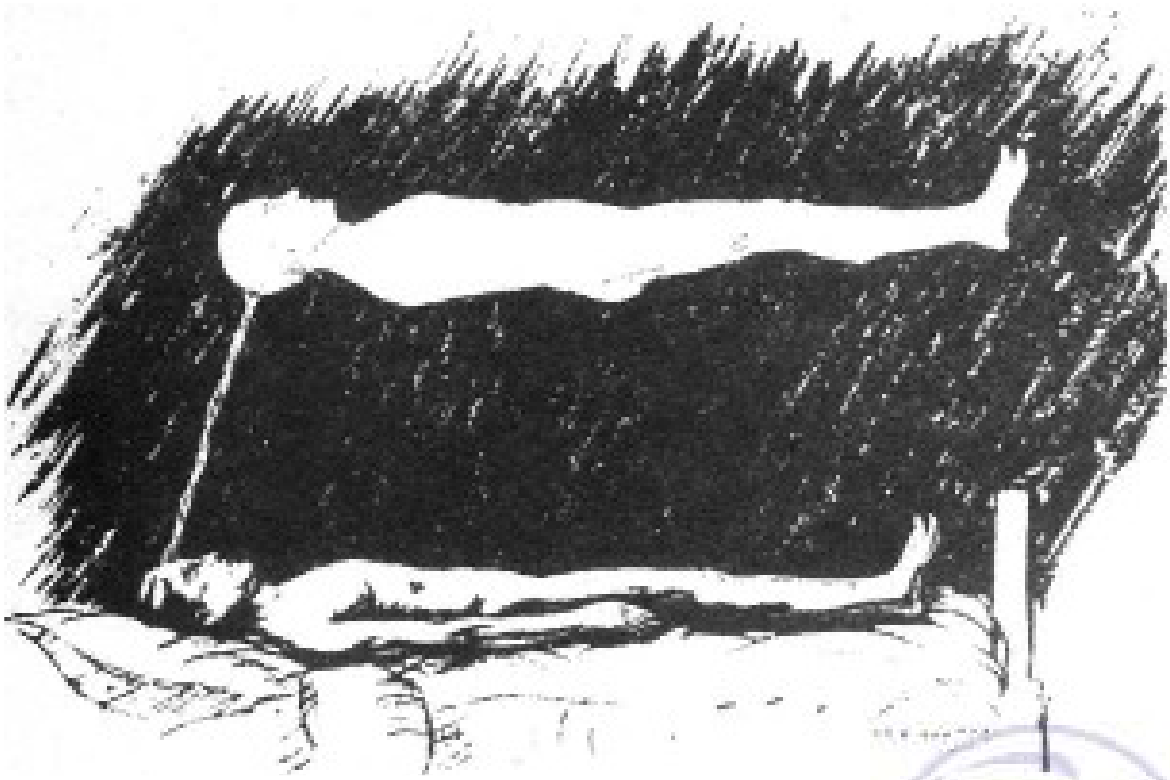
As for the second question, the answer is unequivocal. The OBE does not, at least for these subjects, and under these conditions, occur in a state resembling dreaming. In one case, with Monroe, there was something like a dreaming sleep state, but this was far from certain. In all other subjects their states, as measured by EEG, EOG and autonomic activity, were not that of dreaming. They were relaxed, and even drowsy or lightly asleep, but they were not dreaming when they had their OBEs.

There remains one final, but awkward, question. How far can these results be generalized to other subjects, or more especially to other kinds of OBE? We have already come across hints that the induced OBE may be different, in some respects, from the spontaneous experience. Another problem is that some OBEs take place in extreme conditions. The experience!: may be ill, under stress, undergoing an operation or accident or even close to death. Perhaps

all we can safely conclude is that the induced experimental OBEs are not like dreams, not even like lucid dreams. The two *experiences* are similar in many ways, but the physiological states in which they occur can be quite different.

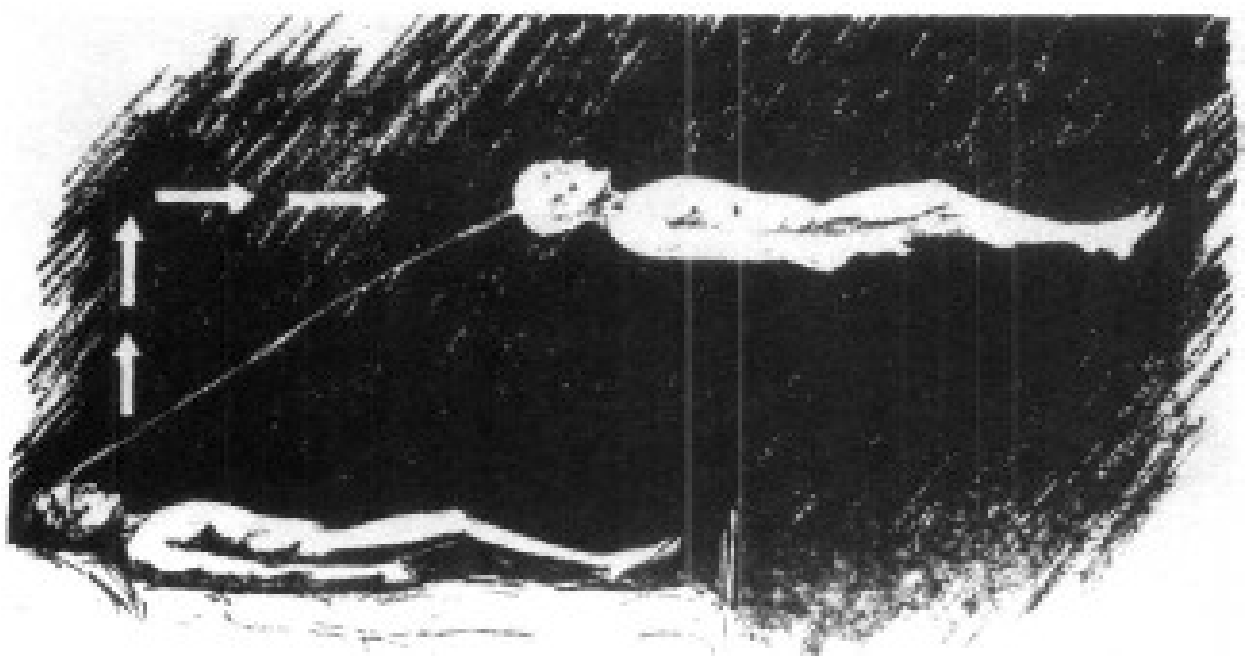
2. Ba with the mummy. A detail from the Papyrus of Ani.
Nineteenth Century, *c.* 1250 B.C.
(From the British Museum)

3. The phantom, slightly out of coincidence.
(From Muldoon and Carrington, 97a*)

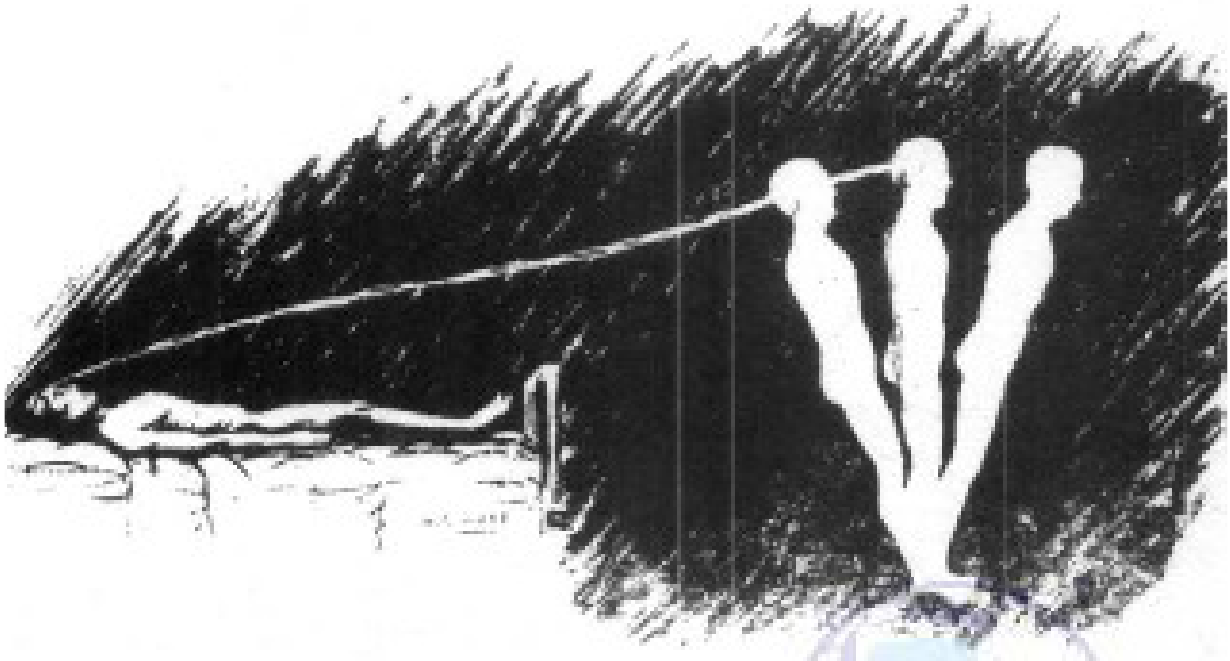


4. The phantom lying in the air above the physical body.
(From Muldoon and Carrington, 97a)

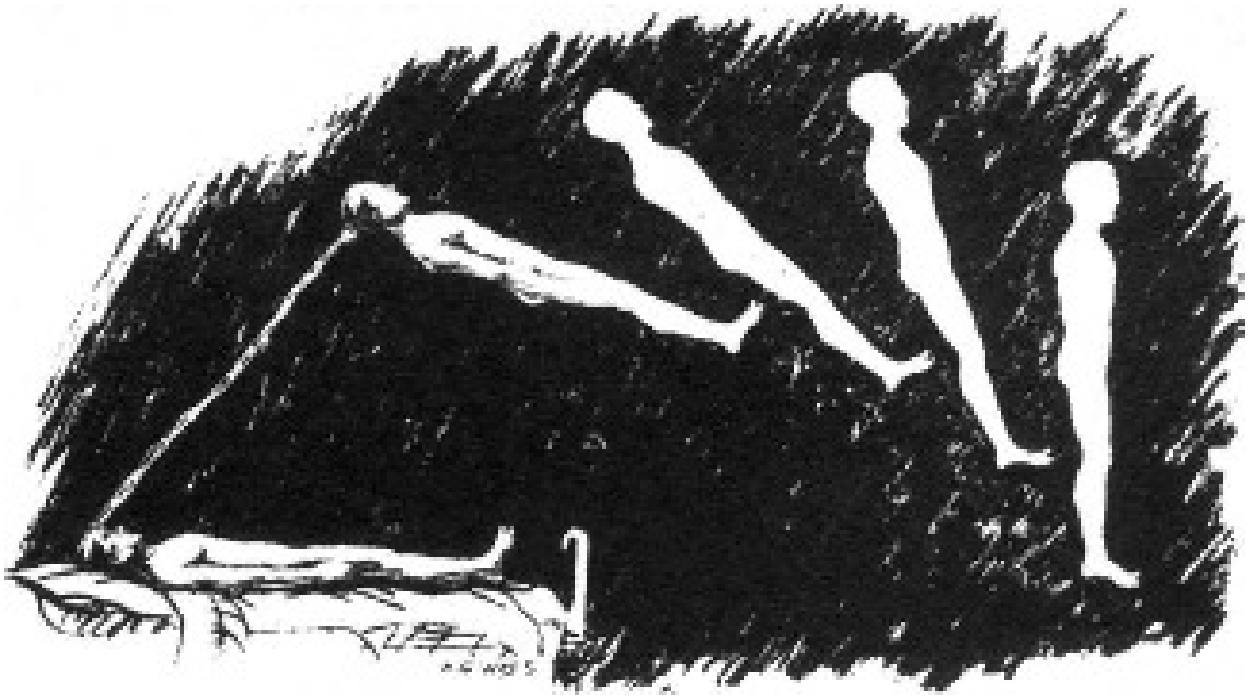
*Numbers refer to books in the References section.



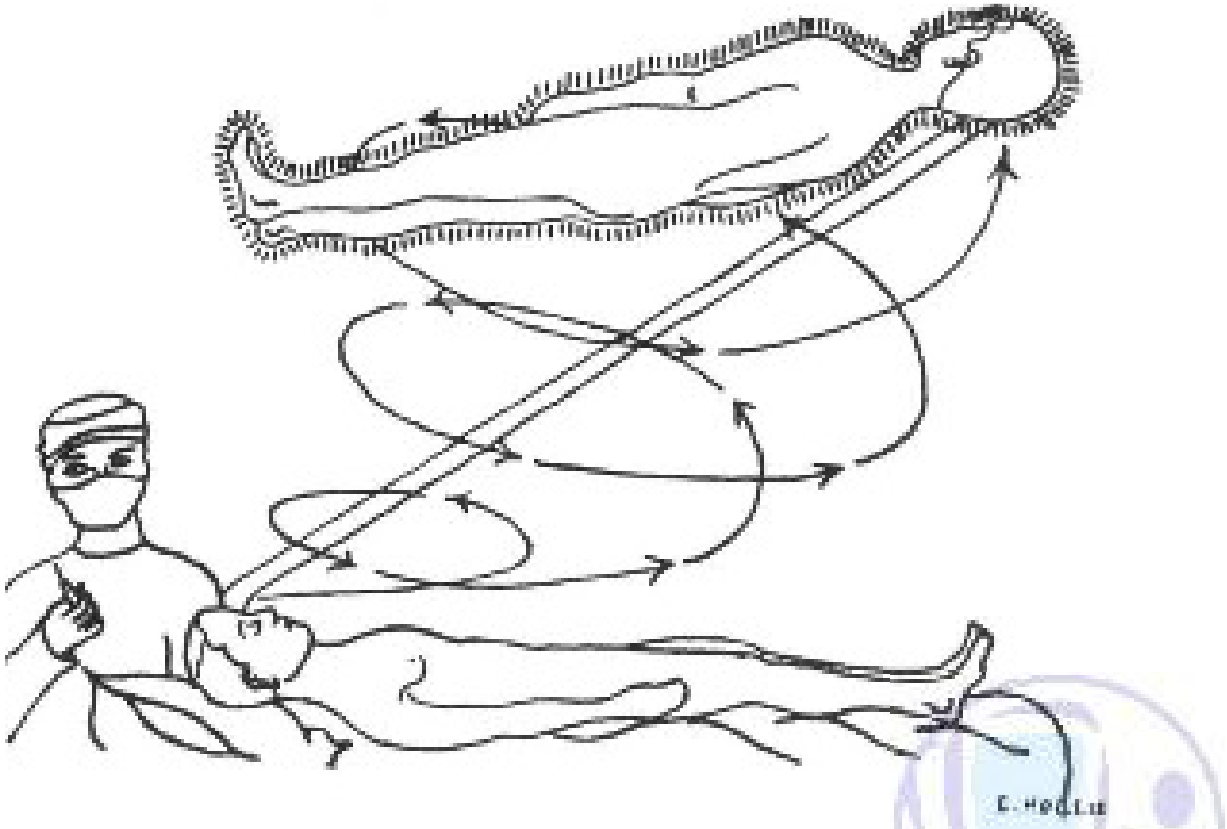
5. The route the phantom takes in projecting.
(From Muldoon and Carrington, 97a)



6. The phantom upright and projected within cord-activity range.
(From Muldoon and Carrington, 97a)



7. How the phantom interiorizes.
(From Muldoon and Carrington, 97a)



8. According to Muldoon and Carrington, if the phantom is exteriorized violently, e.g. with anaesthetics, it ascends spirally, (97b)

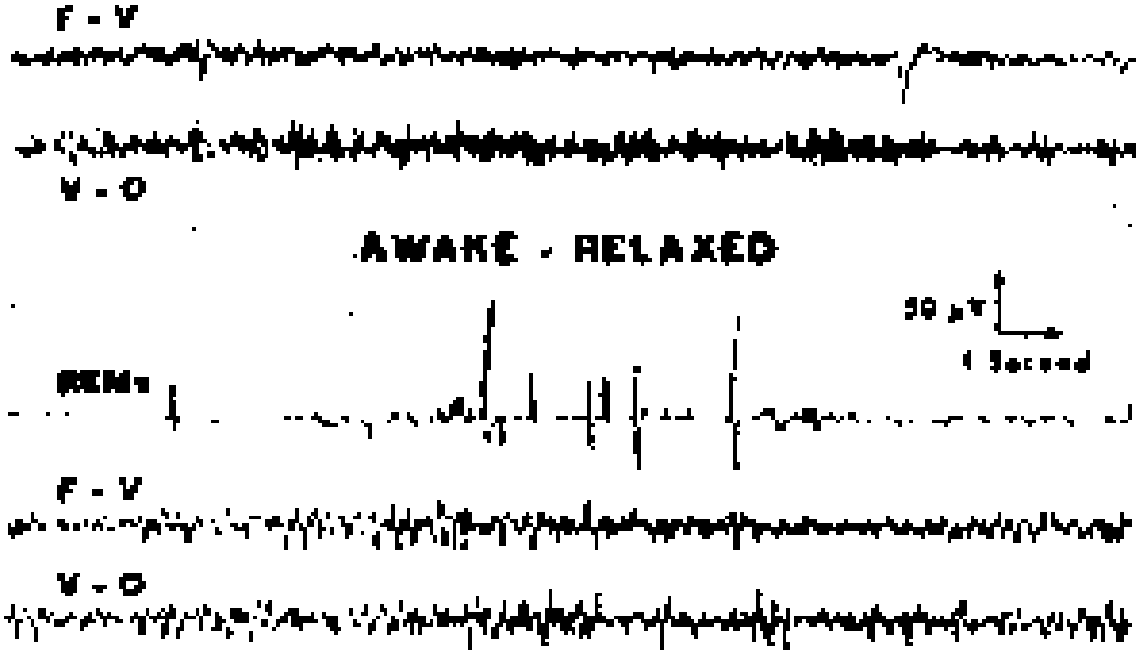
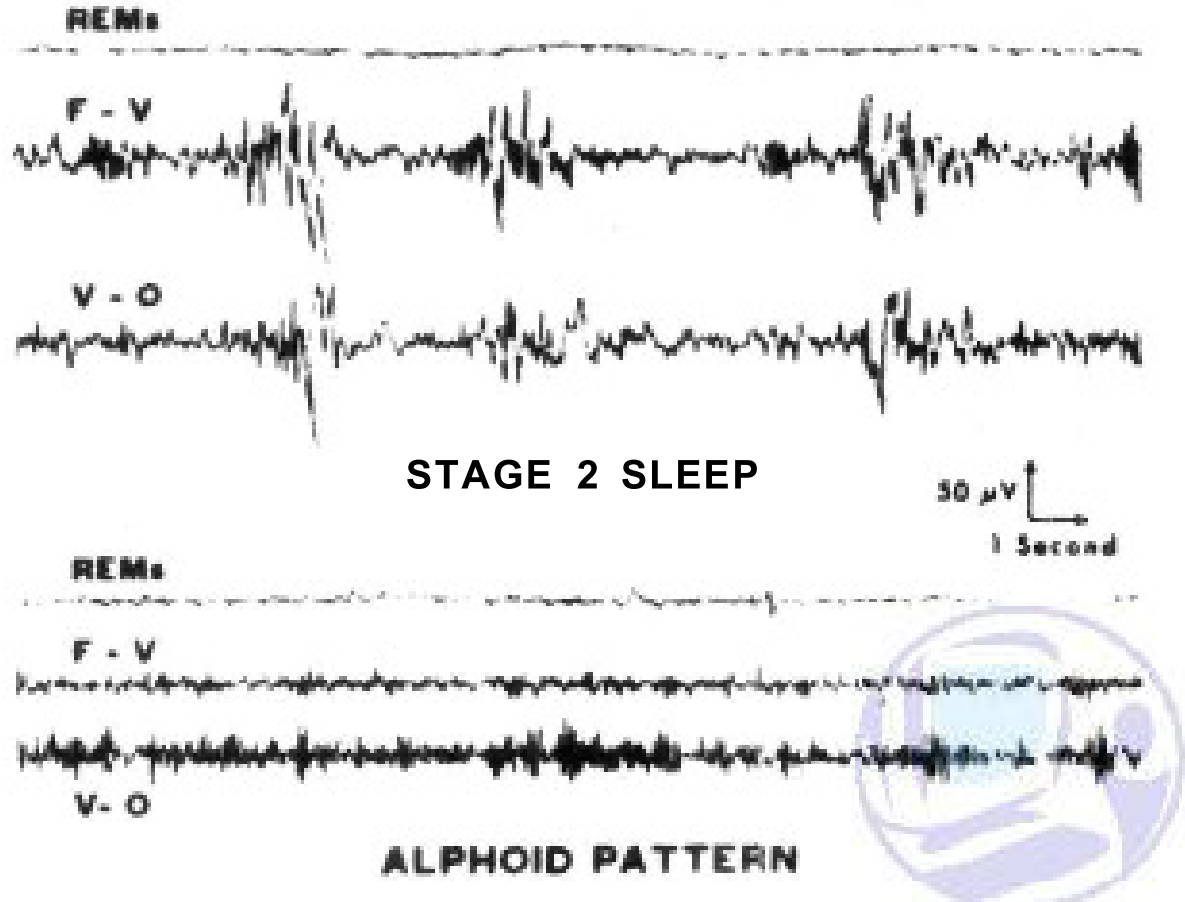


FIG. I. A typical example of Miss Z's waking EEG pattern and an example of Stage I dreaming with REMs.

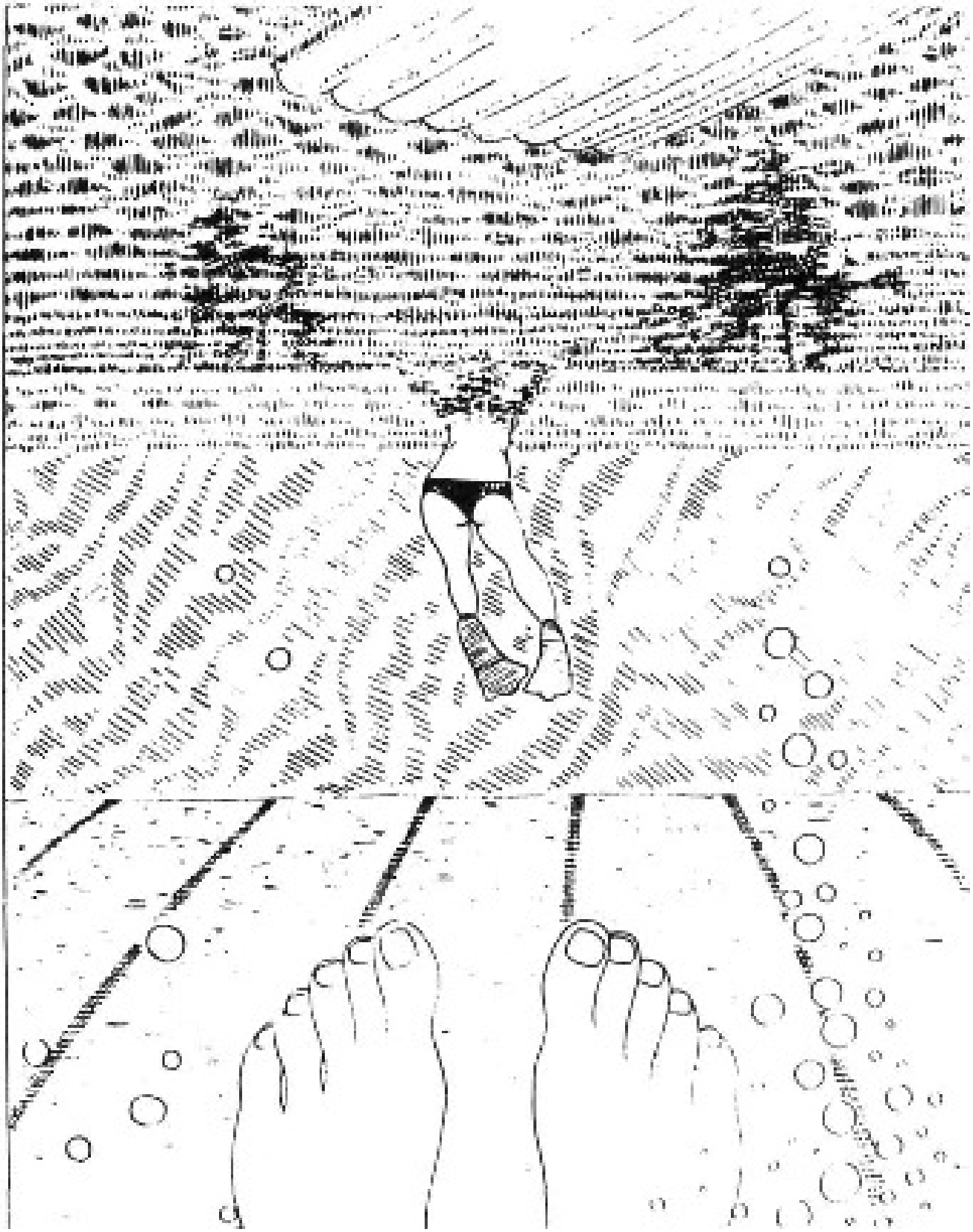


9. Examples of Miss Z's EEG.
(From Tart, 146b)

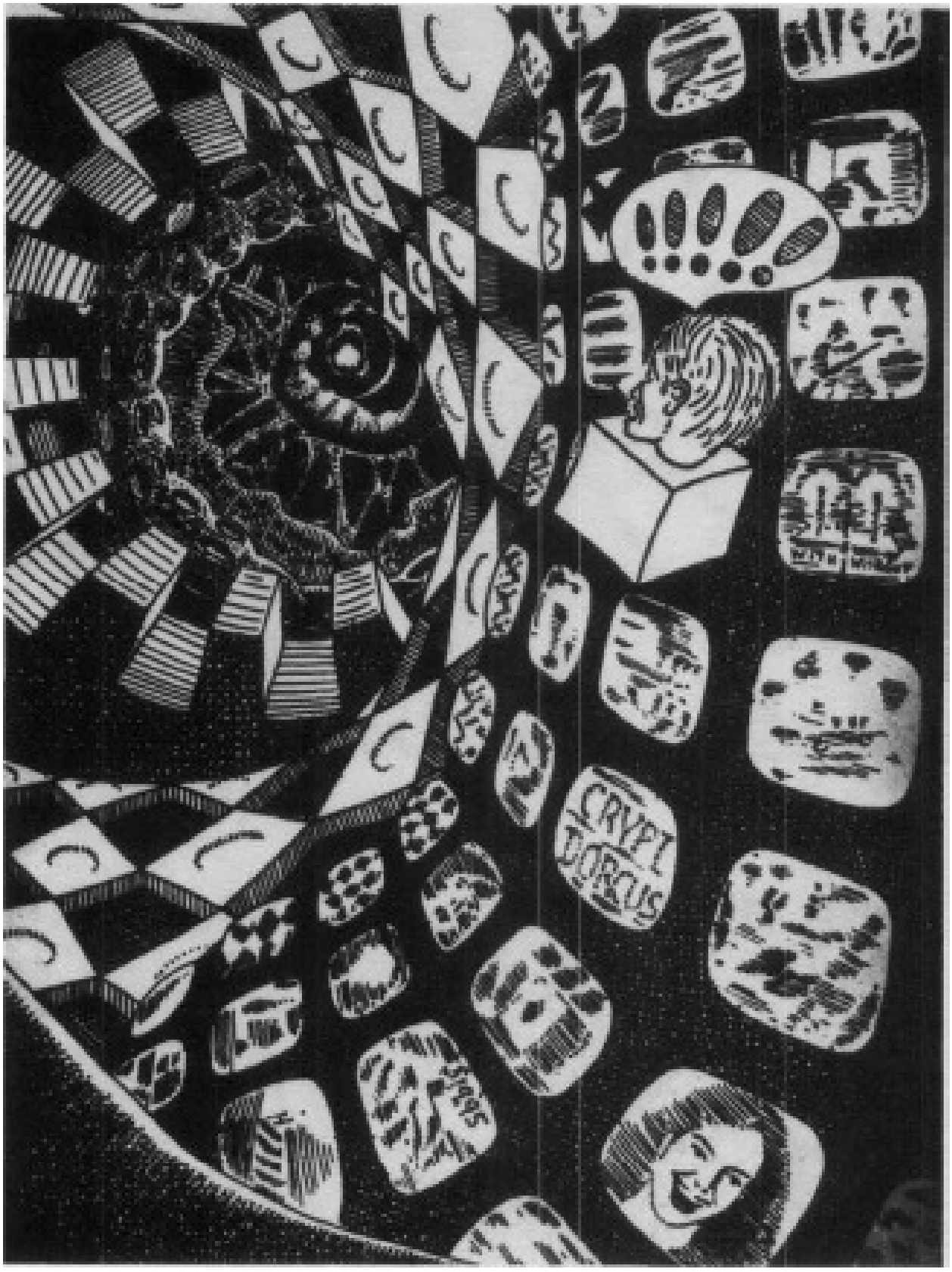
10. Blue Harary preparing for an OBE experiment. With Bob Morris at the Psychical Research Foundation. (Photograph: Bill Roll and Blue Harary)

11. Blue Harary with Bill Roll. (Photograph: Bill Roll)

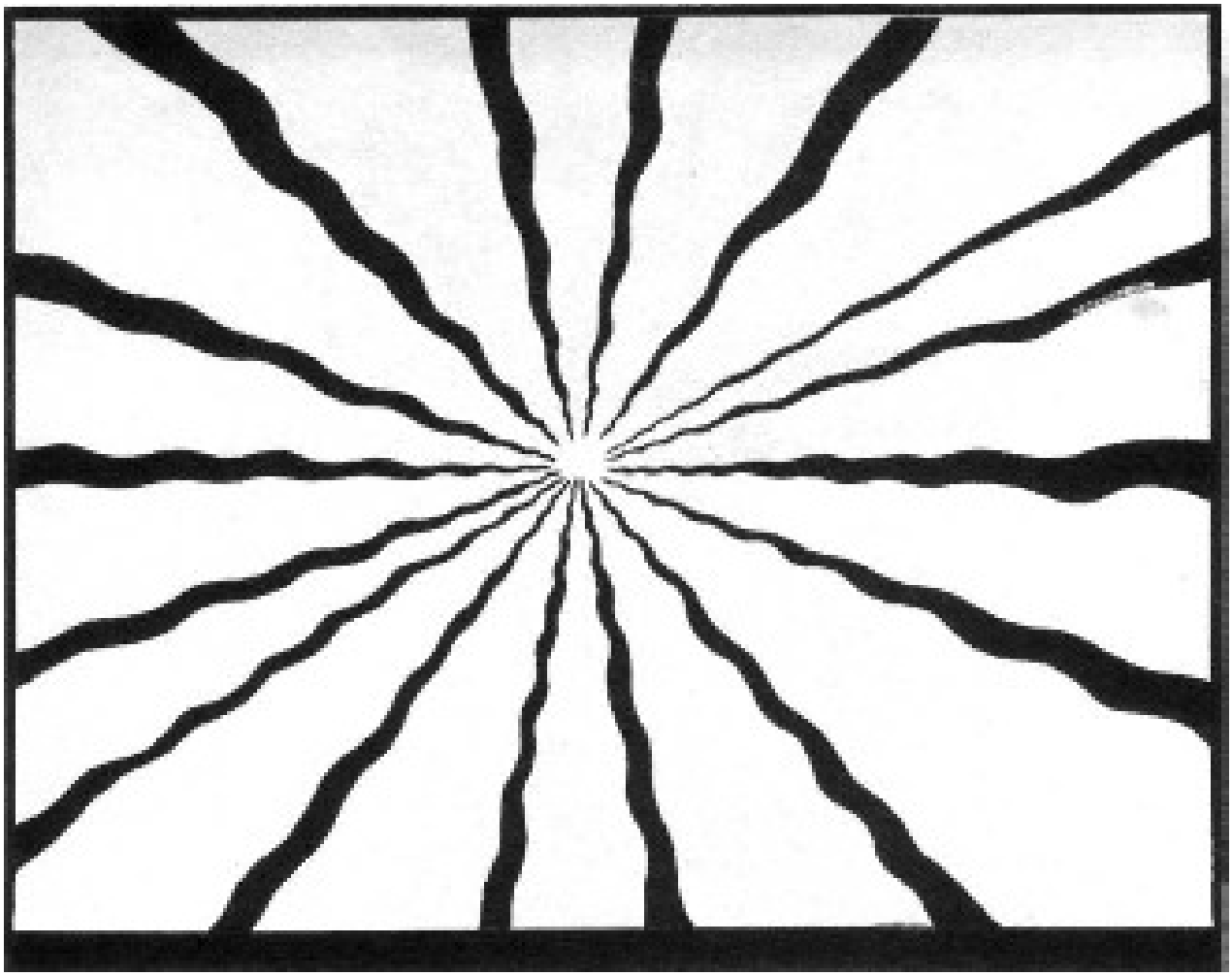
12. The departure of the astral body at death.
(From Muldoon and Carrington, 97a)



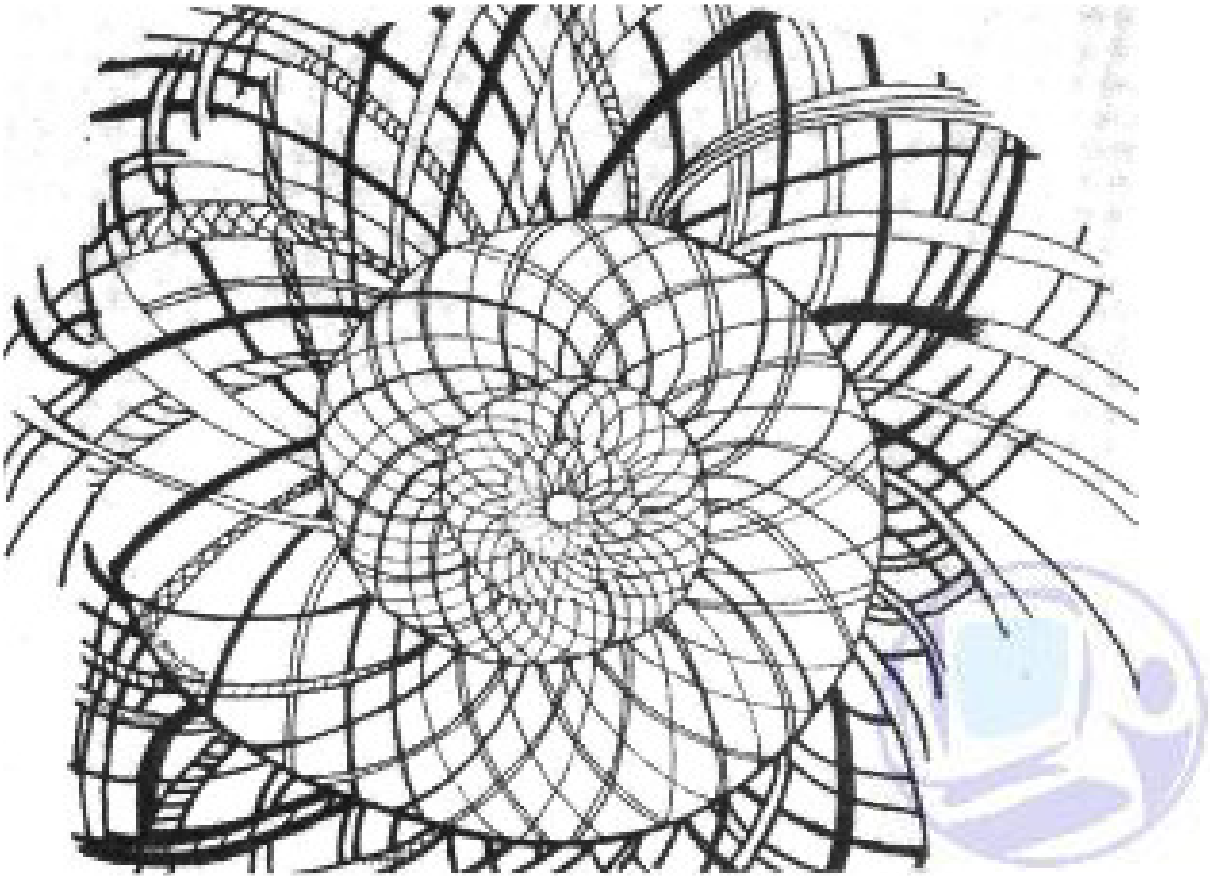
13. Unusual perspectives reported in hallucinatory images include this scene as though viewed from underwater, as well as aerial perspectives with sensations of flying.
(FromR.K. Siegel: "Hallucinations", *Scientific American,* 1977)



14. A lattice-tunnel pattern with complex memory images at the periphery.
(FromR.K. Siegel: "Hallucinations", *Scientific American,* 1977)



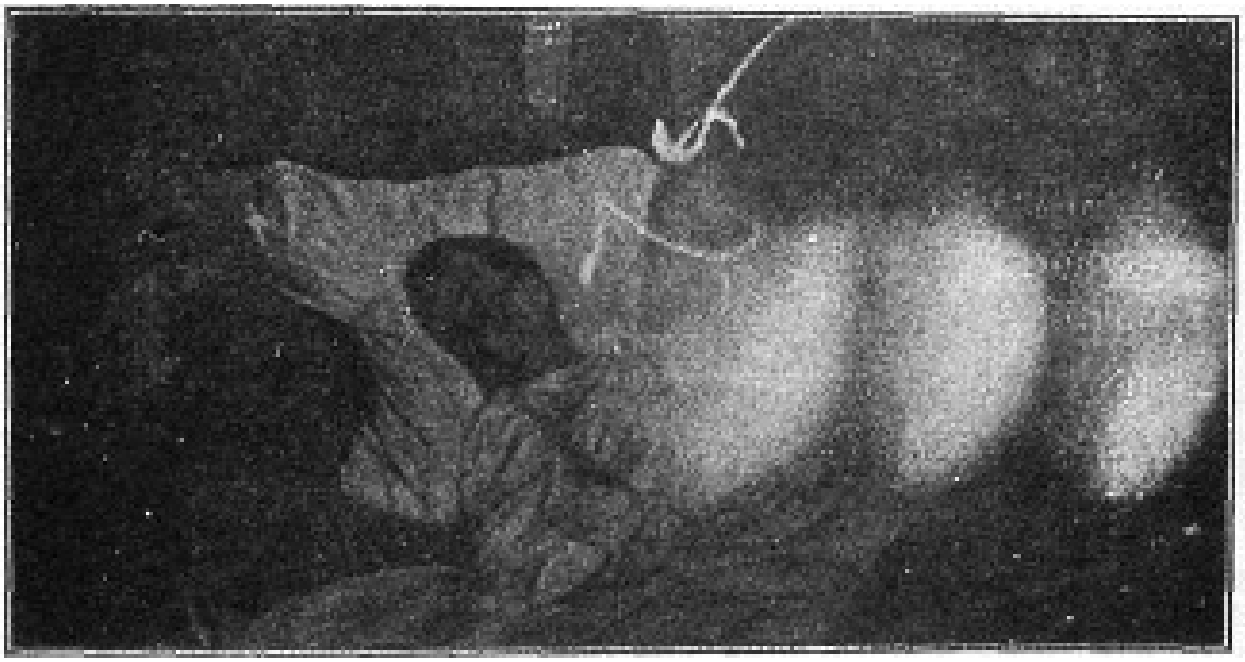
15. The light at the center of the tunnel.



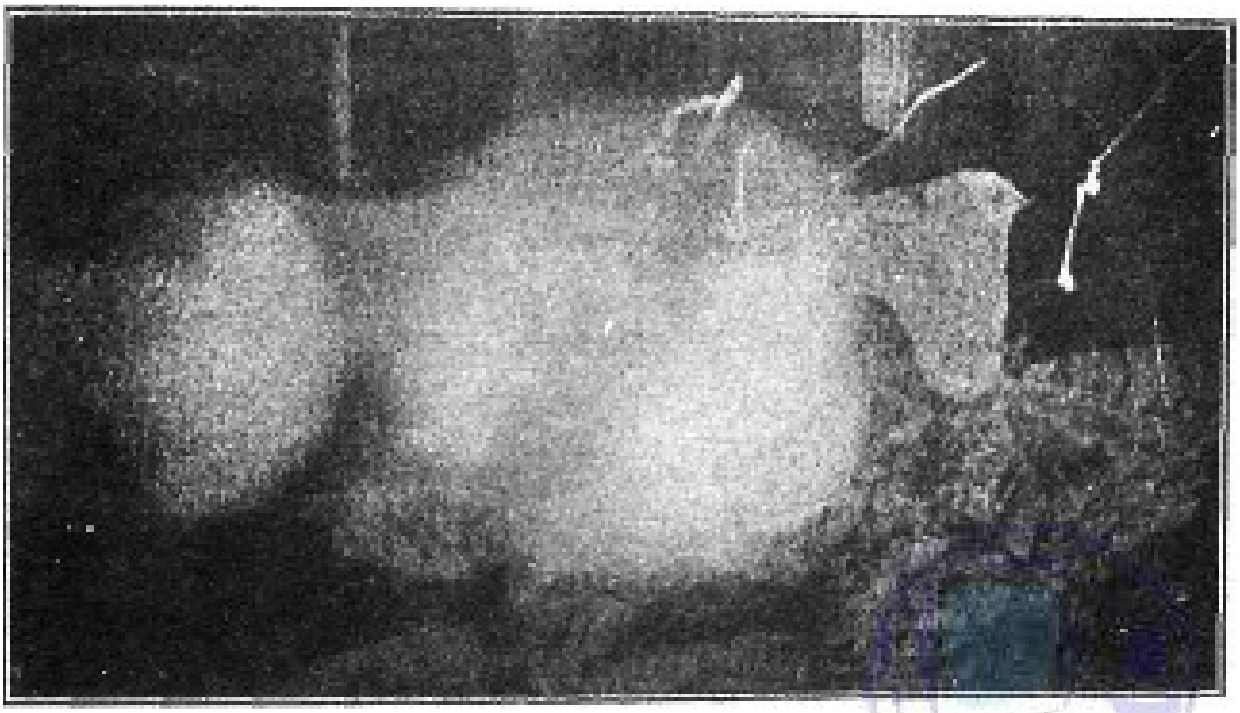
16. A spiral lattice.

17. An astral visitor.
(From Carrington, 17b)

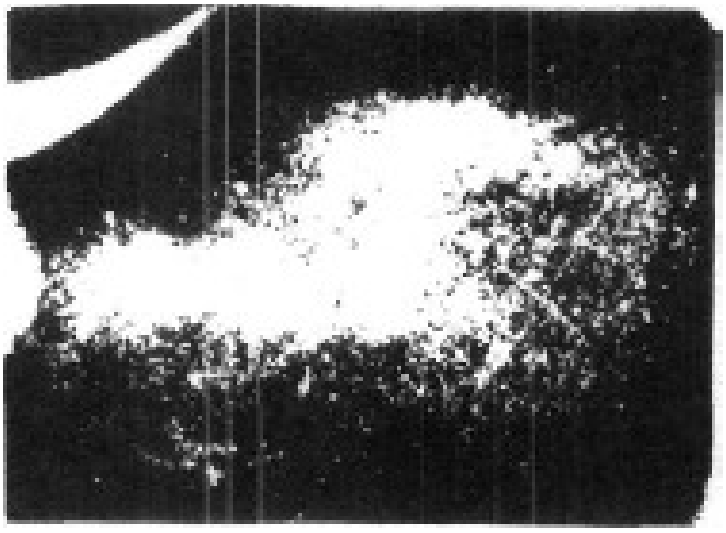
18. Projection in an "hypnotic trance."
(From Carrington, 17b)



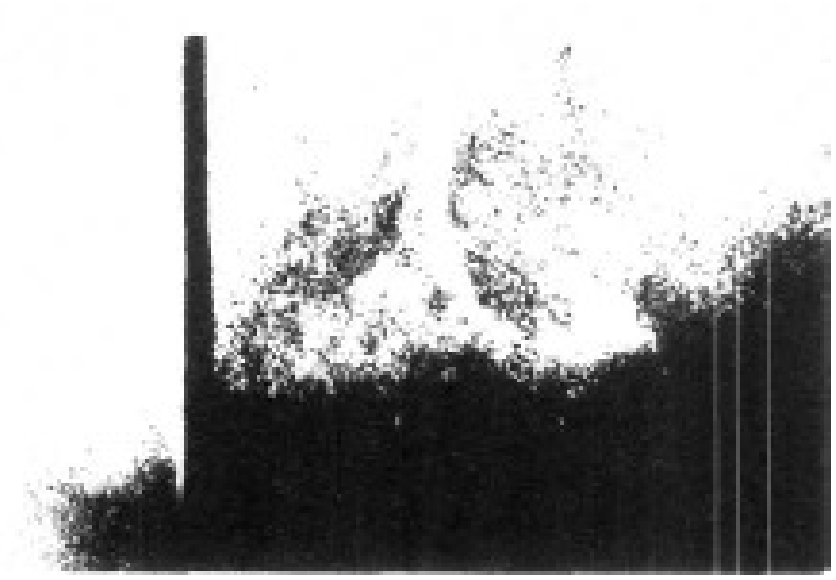
19. Photograph of Madame Baraduc, a quarter of an hour after death.
(From Carrington and Meader, 18)



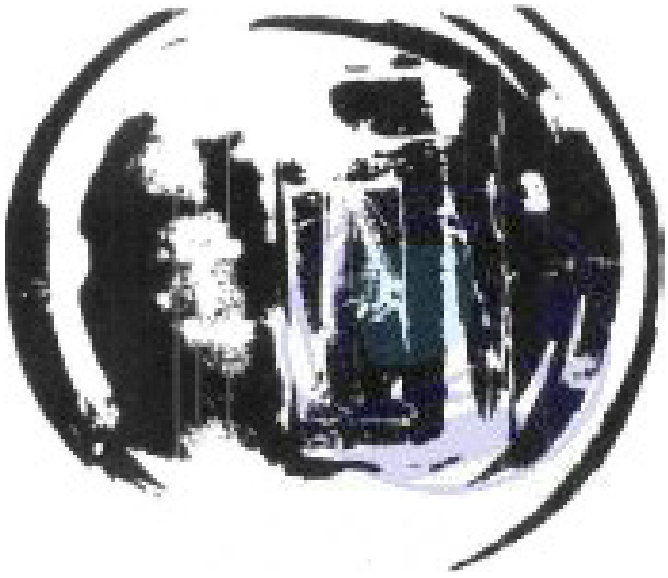
20. Photograph of Madame Baraduc, a bare hour after death.
(From Carrington and Meader, 18)



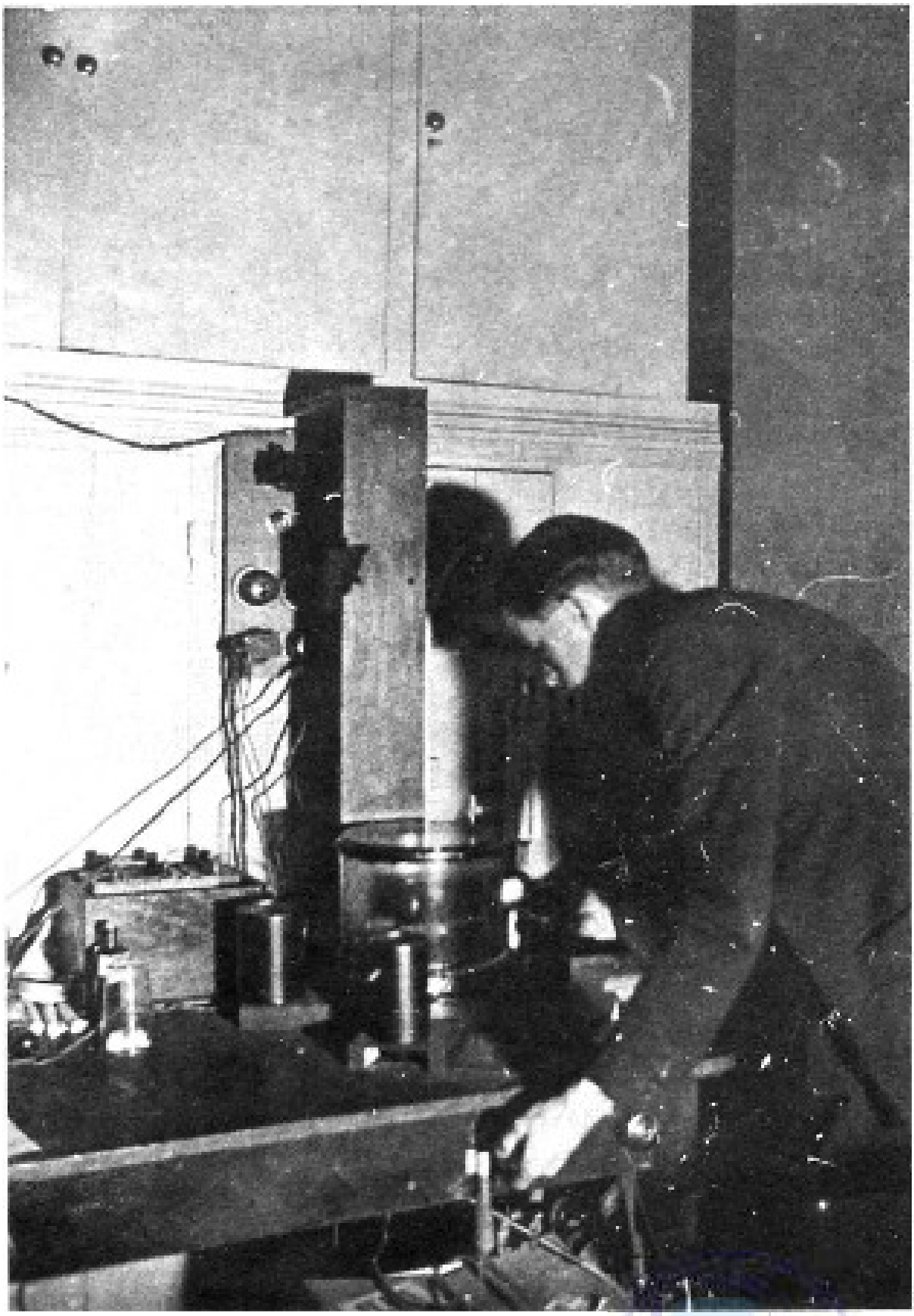
21. Phantom frog enlarged. Photograph taken in experiments with a cloud chamber. (From the SPR archives)



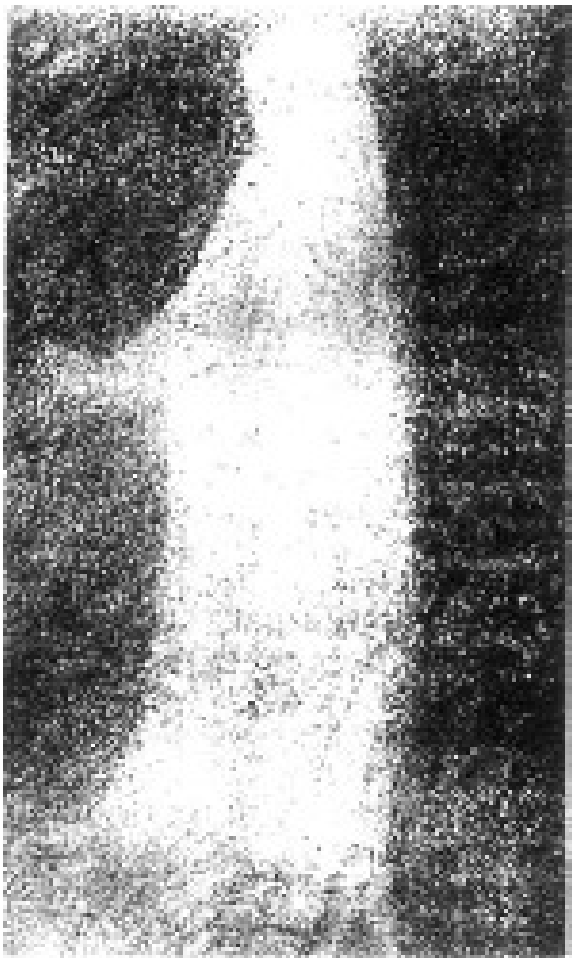
22. Phantom mouse enlarged. (From the SPR archives)



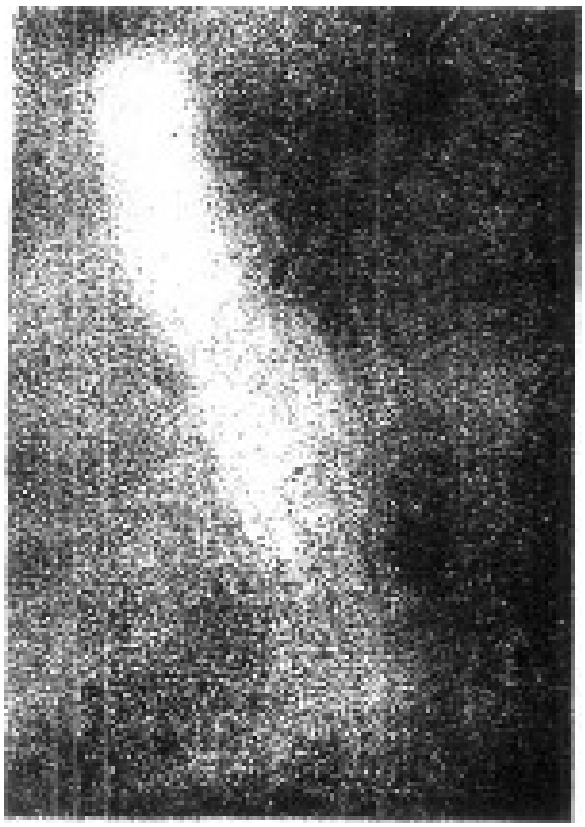
23. Phantom grasshopper enlarged. (From the SPR archives)



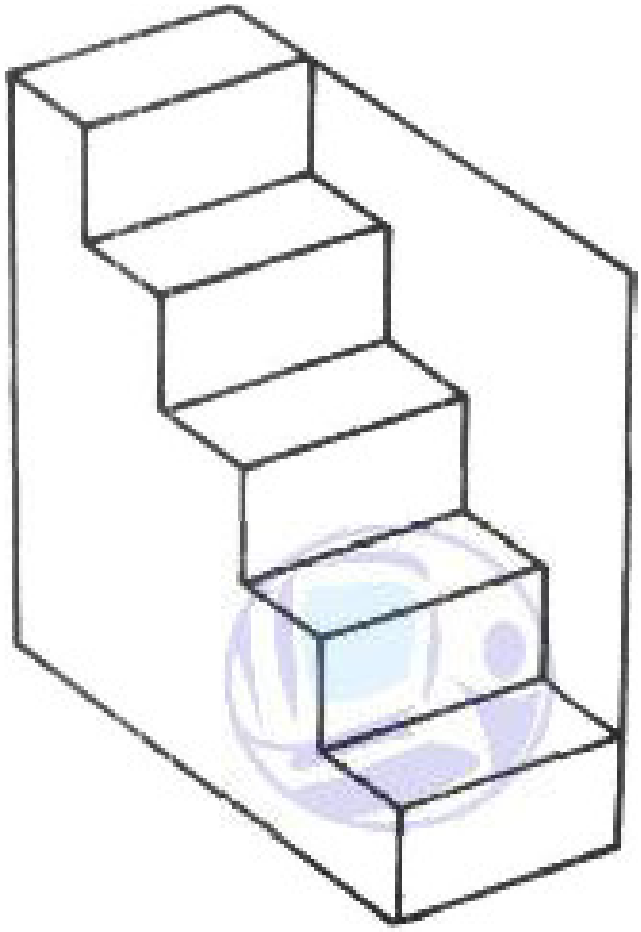
24. Mr Hopper trying to obtain phantoms with a cloud chamber. (From the SPR archives)



25. Photograph of the astral body of Madame Lambert. (From Carrington, 17b)



26. Photograph of the swaying of Madame Lambert's body, from early experiments. (From Carrington, 17b)



27. The Schroder staircase. An ambiguous figure which can be seen in either of two ways, as though from above, or from below. It is impossible to see both at once. (Photograph: John Harris)

13 Visions of the Dying

What happens when you die? Of course I don't really expect to answer such a question, but I ask it because of the implications some have thought the OBE holds for the question of survival. To be more precise; it has been suggested that if an astral body, or some sort of double, can leave the physical body in life, then perhaps it can do the same at death. On this view death is no more than a permanent astral projection, and astral projection a rehearsal for death.

This kind of view has been strongly defended by Muldoon and Carrington (97a) and Crookall (26a). Some people have thought that visions seen by the dying and the evidence on 'near-death experiences' (NDEs), gathered by such people as Moody (94) and Kübler-Ross, supports it. Opposing it are two main types of alternative. First, there is a wide variety of religious teachings having too many different views to discuss in detail here; and second there are several psychological approaches based on a materialist view that 'death is the end'.

According to traditional astral projection theory, death involves a process of evolution. As the physical body dies, the astral is gradually freed from it and rises above it as it would do in projection. Having hovered there for some time, during which the dying person can see his own body and what is going on around him, it leaves, for other worlds. The etheric body is now no longer needed, since its job was one of communication between astral and physical, and so it begins to dissipate, sometimes being visible as a whitish form around or above the dead physical body. It takes some days to disappear. This theory gives a clear outline of what is expected at death. Any clairvoyant person at the deathbed should be able to see the departure of the astral body and later the dissipation of the etheric body. The dying person himself should experience all the phenomena of astral projection, with the sensations of separation, and entry into the astral world. There he may be able to glimpse the spirits of the dead coming to greet him and help him on his way. The state in

which he begins his afterlife will depend on his life on earth and his state of evolution there. But in any case he will have ample opportunity to develop after death and so to rise to higher planes in ever more subtle bodies.

Some religious teachings are compatible with this description of death. Others suggest that in death consciousness will be transformed with the loss of ego or individuality, and the absorption of the individual in some general or cosmic consciousness. Others have regions of heaven and hell, purgatory and such 'places' where the dead go. The idea of crossing a symbolic divide, such as the river Styx, to the other world is also common. But I would get too far diverted from the subject of OBEs if I were to consider all these different ideas, or to discuss the question of survival in general. I must therefore confine myself to considering the two main views.

The simple materialist viewpoint is that if consciousness is a product of brain activity and the person and his unique personality are products of his body, brain and behaviour, then of course when the brain dies, behaviour ceases and the body is buried then the person will also cease to exist. His personality will be lost to the world, except insofar as it remains in his creations, works, children or whatever, and his consciousness will just stop. This view is usually associated with the belief that deathbed visions, OBEs and NDEs are all products of the imagination or hallucinations of a dying brain; there are no angels and spirits to be seen and nothing leaves the body in an OBE. Since this view as it stands does not in any way explain all the phenomena, additional explanations are required; and, as we shall see, many psychological accounts of near-death phenomena have been put forward. The two main alternatives are therefore either that something does survive-the same something as is projected in the OBE; or that nothing is projected in an OBE and nothing survives.

There is plenty of evidence to bring to bear on these alternatives. Ever since the founding of the SPR in 1882, and in fact long before, psychical researchers have studied the question of man's survival of physical death. Their techniques have been numerous, involving communications from the dead through mediumship in various forms and the study of deathbed and near-death phenomena, but I shall consider here only four types of evidence. These are: first, the study of apparitions occurring at the moment of death; second, visions of an astral body or other form by those attending a deathbed; third,

the experiences of the dying; and finally the experiences of those who come close to death but recover to tell the tale.

APPARITIONS AT DEATH

Crisis apparitions formed an important part of the early evidence for survival. Typically someone sees or hears an apparition, only to find that that person's death or some other trauma, coincided exactly with the experience. *Phantasms of the Living* (55) is packed with such examples; which the authors attributed to the living, rather than to the dead, because of the strong resemblance between the phenomena in the living and the dying. Myers also included many examples of this type in his *Human Personality and its Survival of Bodily Death* (99b); and in later years cases were collected by Bozzano (13), by Carrington and Meader (18), and by Camille Flammarion, in his study of *Death and its Mystery* (40). Of course cases were also published in the *Journal* and *Proceedings* of the SPR. Such cases have a bearing on OBEs to the extent that the apparition seen or felt might be interpreted as the departing double of the dying, but of course this is not the only possible interpretation.

First, the evidentiality of many cases can be questioned. Usually it depends on a coincidence in time between the apparition and the death, and that is always hard to prove after the case. I can no more argue that all the cases ever presented can be 'explained away' than I can be sure they were all genuine, but I can point to some possible sources of error. Memory is highly fallible and few people have been sure about the time or even the day on which the apparition was seen. Also one is more likely to remember experiences which did coincide with a death or other important event, and to 'remember' it as though the two occurred exactly together. Only in the best cases are there independent checks of the times of both apparition and death.

There is also the problem of knowing how often people see apparitions which do not coincide with any death. It is precisely this which the 'Census of Hallucinations' was intended to discover (136). Between the years of 1889 and 1894 a simple questionnaire was given out to members of the SPR which asked the question :

> Have you ever, when believing yourself to be completely awake, had a vivid impression of seeing or being touched by a living being or inanimate object, or of hearing a voice; which impression, so far as you could discover, was not due to any external physical cause?

Further questions were then asked about the person seen, his state at the time and so on. Members of the Society were asked to collect as many replies as they could and in the end 17,000 replies were received, of which 1,300 answers were positive. The investigators analysed the replies, made an estimate of the probability of various coincidences and found that an unexpectedly large number of the hallucinations occurred within twelve hours either way of the death of the person seen. This they took as evidence for survival.

For its time, this was a very advanced study and the statistical methods used were new, but in retrospect little reliance can be placed on the conclusions. Most important is that the sample was heavily biased. The questionnaires were given to anyone who was prepared to fill them in, and no attempt at random sampling was made. It is obvious that someone who had an interesting story to tell would be more likely to want to reply than someone who had nothing to report. Many cases were investigated very thoroughly, but even so errors of memory, slight exaggerations, conscious or unconscious, and other such errors could not be ruled out entirely.

Another problem is more serious for the question of survival. Even if the most careful study showed highly evidential cases of apparitions at the moment of death, this proves neither the existence of a double nor survival. It could always be argued that telepathy or clairvoyance combined with an hallucination was responsible for the vision. This argument has become known as the 'super-ESP hypothesis'; 'super' because the powers of ESP have to be stretched to such an extent to account for some of the phenomena claimed (47a).

The problem is that for any evidence which is put forward in support of survival, an alternative account can always be found which involves only ESP or PK by the living, even if that account seems more far-fetched than does the idea of survival. This problem appears in many guises and results from the fact that ESP is defined negatively and can never be ruled out. This means that proof of survival is not strictly possible, but in fact this is not half as serious as it sounds because 'proof is not really required. If it could be shown that the evidence was such that the survival interpretation fitted it far better, and made it far more comprehensible than did any alternative, it would come to be accepted, whether or not the dubious alternative of ESP had been directly excluded. Certainly there are many people who believe that the evidence is of that quality.

VISIONS OF ATTENDANTS AT DEATHS

The second type of evidence, which is more closely related to OBEs, used to be more frequently reported than it is now. This consists of the visions seen, or sounds heard, by those attending a deathbed. Sometimes beautiful music could be heard by those at the bedside, which faded away as their patient 'passed on'. Sometimes 'angels' or 'spirits of the dead' were seen coming to take the dying one away, but of most interest here are the cases in which something like an astral body was seen leaving the physical body at the moment of death. Sir William Barrett made a collection of cases (4) and Greenhouse (50), Hyslop (150) and Crookall (26i) all give examples.

One which was published in the SPR *Journal* in 1908 (4 pp. 105-8) concerned a Mr *G.* whose wife died in May 1902. Some five hours before his wife's death, Mr *G.* happened to look towards the door and there he saw 'three separate and distinct clouds in strata. Each cloud appeared to be about four feet in length, from six to eight inches in width, the lower one about two feet from the ground, the others at intervals of about six inches . . .' These forms approached the bed, and Mr *G.,* gazing through the mist, saw & vision of a woman, transparent but shining like gold, dressed in a long and flowing Grecian costume with a brilliant crown upon heir head. Two more figures knelt by the bedside and others hovered about. Above the body of his wife floated a nude white figure, connected by a cord from the forehead. Mr *G.* watched this vision continuously until the end came. His wife gasped, breathed again, and with her last breath the cord was suddenly severed and the 'astral ifig;ure' vanished. The other forms departed as well, and a feeling of oppression that had weighed upon Mr *G.* left him and he was able to set about the business of directing what was to be done with the body. He concludes, 'I leave my readers to determine whether I was labouring under a mental delusion caused by anxiety, sorrow and fatigue, or if a glimpse of a spirit world of beauty, happiness, calmness, and peace was granted to my mortal eyes.'

Although cases like this seem to be far more rare in recent years and so we cannot bring modern methods to bear on them, the man's question is still as pertinent as ever, and applies to all the phenomena we are considering here. Can they be explained by psychological phenomena, hallucinations and so on? Or do we need to invoke the theory of a double and of survival in some form? It is with respect

to the last two types of evidence that this question has received the most detailed study. This is the experiences of those close to death.

EXPERIENCES OF THE DYING

Experiences of this kind fall into two groups : deathbed experiences, occurring to those who actually do die, which are usually related afterwards by someone who was present at the death; and the near-death experiences (NDEs) recounted by people who have nearly died, but have recovered to tell their own tales. Both of these provide descriptions of what it is like in the last stages of life, but it must be borne in mind that in every near-death experience the person did not die, and so he cannot be said to have been dead at the time of his conscious experience, even though physiologically he may have showed all the signs of death. The same applies to deathbed experiences. If the person was capable of recounting his vision or other experience then he cannot have been dead at the time. Therefore we shall not hear accounts from the dead, but only accounts from those who have stared death in the face.

The study of deathbed experiences has a long history. In 1926 Sir William Barrett put together a little collection of cases entitled *Death-bed Visions* (4). As well as visions of the spirit leaving the body and music heard at the time of death, this book included many types of vision seen by the dying person himself. Many of these seemed to point towards death as a passing from one state to another: a beautiful world may be glimpsed beyond this world, 'spirits' of the dead may be seen around the bedside, and 'angels' or other spiritual beings may be seen coming to take the dying person away. A type of case of particular interest to Barrett was that in which the dying person saw someone there who was in fact dead, but this fact was not known to him at the time. Similar cases had previously been collected by Miss Cobbe in her 'Peak in Darien' (20). Both these authors believed that this kind of evidence supported the theory of survival and Rogo, who reviewed some of this research (124c), concluded that all the investigators were drawn to the 'survival hypothesis'.

One such case was reported by Lady Barrett (4 pp. 10-15). In her work as an obstetric surgeon she had one day delivered a baby but the mother lay dying and begging for it not to get dark. Then suddenly she looked up eagerly towards one part of the room with a radiant smile and said, 'Oh, lovely, lovely.' When asked what was lovely she replied that she could see 'Lovely brightness - wonderful

beings'. Then she exclaimed that she saw her father, who was so glad that she was coming. When she was shown her baby the woman asked whether she ought to stay, for the baby's sake, but added, 'I can't-I can't stay; if you could see what I do you would know I can't stay.' Later she spoke to her husband and asked him not to hide the beautiful vision, and then she said she saw Vida, her sister. Then after apparently seeing both the visions and the room together for about an hour she died. It was added that the woman had not been told of the death of her sister some three weeks before, because of her own ill health.

This case includes most of the features thought to be evidence for survival by many psychical researchers, but it could still be argued quite cogently that the visions were the product of a dying brain and the sister's death was known subconsciously or perceived by ESP. Obviously if we are to decide which interpretation is most valid something more than just endless cases is required; and recently different approaches have been taken.

Large-scale surveys of doctors' and nurses' death-bed observations have been carried out by Karlis Osis, the American parapsychologist, and Erlendur Haraldsson (104b, c). Together they tried to find out whether deathbed visions are evidence of an afterlife, or are the result of malfunctioning of the dying brain. They predicted that if the latter were the case then the visions seen would reflect largely the expectations of the patient and his religious background; they would depend to a great extent on the cause of death and the drugs being administered and there would be more visions seen by patients who might be expected to be hallucinating. To investigate these predictions, Osis and Haraldsson distributed questionnaires to doctors and nurses both in America and in India.

In the USA questionnaires were sent to 2,500 physicians and the same number of nurses, and 1,004 replies were received. In India a postal survey was not thought practicable and so 704 medical personnel were interviewed. The questions they were asked included some about their own background and beliefs and then some about the patients who had died in their care. They were asked how many patients they had attended and who had died, how many had seen visions, or experienced extreme changes of mood, and what those were like. In addition they were asked for details about those patients' religious beliefs, their illness or cause of death, and any drugs they were taking prior to death. Altogether 877 cases were ob-

tained. From all this information Osis and Haraldsson attempted to find out how the deathbed experiences varied.

First of all they found out that the majority of visions (80%) were of dead people or religious figures. This far exceeds the proportion among visions in the general population. In India there were more religious visions and in America more visions of the dead. Of all the dead people seen, over 90% were relatives of the dying person, and 65% seemed to have come to take the person away. Here an interesting difference emerged between the two cultures. Most of the Americans were willing to 'go' with those who came to fetch them, but there were many Indians who were not. In fact almost all those who refused to 'go' were Indians. Osis and Haraldsson related this to the different beliefs about the roles of these messengers. Interestingly this was the only major difference between the cultures. More 'serenity' was observed in Christians than Hindus, but in most other ways the visions were comparable with only small differences in interpretation.

Other interesting findings concerned the effect of drugs and different causes of death. Or perhaps I should say non-effect, for on the whole it was found that the visions and mood changes were not influenced by these factors. From information on drugs, temperature, illness and so on the investigators developed a 'Hallucinogenic index' as a measure of how likely the patient was to have been hallucinating. They found that 43% of the visions were experienced by people in what they described as a normal state of consciousness, and this index did not seem to predict whether visions were seen or not. Finally the visions were not related to factors such as sex, age, or other demographic variables. It seemed to Osis and Haraldsson that the source of the visions seen did not lie in the state of malfunction of the brain, or the prior beliefs and expectations of the patient, but that they appeared independently of these things. All this led them to conclude they had collected evidence favouring the survival rather than the destruction hypothesis.

These conclusions must be questioned, however, as must the data collected by Osis and Haraldsson. Their survey suffered from a number of serious drawbacks. First of all there was the sampling. Out of 5,000 questionnaires sent out only 20% were returned, and there are reasons for supposing that the people who replied would have differed from those who did not. For example they may have been more favourably disposed towards the idea of survival; or have happened

to be just those people who had seen the most in the way of deathbed visions.

Even if one supposed that these could be taken as representative of the whole population, there are other problems. All the answers rely on the memory and the honesty of the people replying. They may all honestly have described their patients' experiences as well as they could, but they could surely not be expected to remember accurately every dying patient they had ever attended in perhaps a long career in medicine. Finally they were, of course, giving secondhand accounts of the experiences. Even though the doctors and nurses may have tried to exclude their own biases and interpretations from their accounts, they could never hope to give an account equivalent to one that might be given by the dying patient himself. For all these reasons the results obtained by Osis and Haraldsson have to be treated with care. I do not think we can conclude with certainty that the visions were the result of glimpsing an afterlife, rather than that they were a psychological phenomenon.

I have mentioned the problem that all these descriptions were obtained secondhand, and this is common to most accounts of deathbed experiences; but there are exceptions. For example, some people have had visions some time before their death. John Oxenham is one example. He became ill with bronchitis and in the midst of his suffering heard a screaming row outside, and a great crash, whereupon he found himself in another world and able to see clearly. He saw beautiful scenery, buildings and gardens, and met and talked to many people. All his adventures 'out of the body' are described in a little book by himself and his daughter who nursed him (109). Of course such accounts by the dying are rare, but another way to approach this problem is to gather the accounts of those who recover from their encounter with death. That is, accounts of near-death experiences. These are of such interest that they deserve a chapter to themselves.

14 Close Encounters with Death

Much publicity has recently been given to research on near-death experiences (NDEs), experiences of those who survive a close encounter with death, but such research is not new. Towards the end of the last century a Swiss geologist, Albert Heim, collected many accounts from climbers who had survived near-fatal falls in the Alps (101a). He was a keen mountain climber and it was his own mountaineering accidents which had aroused his interest. Accounts of near-death experiences have come from many other sources. Sometimes people have written about their own. For example, Carl Jung described how he saw the earth from high up in space while he 'hung on the edge of death' (94 p. 320). And accounts can be found in many collections of cases.

However, there is a good reason for the recent upsurge of interest in NDEs; and that is that more people now survive close brushes with death. In the time of Myers, Barrett or Flammarion, deathbed accounts were more common as people lingered on with consumption and often died at home. But today they are rushed to hospital and resuscitated from states which, not so long ago, would have been called death. One can suffer a cardiac arrest and the cessation of breathing and even most brain activity, and still be 'brought back to life'. This has necessitated changes in the definition of death and the laws surrounding it, but of most importance here, it has provided a large number of people who have been very close to death but have survived to tell the tale.

MOODY

Most popular of these tales have been those told by Elizabeth Kubler-Ross who has long worked with the dying, and those collected by Raymond Moody (94) an American doctor who tried to overcome people's fear of talking about death in 1970s America. Moody interviewed many people who had had accidents or been

resuscitated, and put together an idealized version of a typical near-death experience. He emphasized that no one person described the whole of this experience, but each feature was found in many of the stories. Since Moody describes the experience so well I can do no better than use his words:

A man is dying and, as he reaches the point of greatest physical distress, he hears himself pronounced dead by his doctor. He begins to hear an uncomfortable noise, a loud ringing or buzzing, and at the same time feels himself moving very rapidly through a long dark tunnel. After this, he suddenly finds himself outside of his own physical body, but still in the immediate physical environment, and he sees his own body from a distance, as though he is a spectator. He watches the resuscitation attempt from this unusual vantage point and is in a state of emotional upheaval.

After a while, he collects himself and becomes more accustomed to his odd condition. He notices that he still has a 'body', but one of a very different nature and with very different powers from the physical body he has left behind. Soon other things begin to happen. Others come to meet and to help him. He glimpses the spirits of relatives and friends who have already died, and a loving, warm spirit of a kind he has never encountered before — a being of light — appears before him. This being asks him a question, non-verbally, to make him evaluate his life and helps him along by showing him a panoramic, instantaneous playback of the major events of his life. At some point he finds himself approaching some sort of barrier or border, apparently representing the limit between earthly life and the next life. Yet, he finds that he must go back to the earth, that the time for his death has not yet come. At this point he resists, for by now he is taken up with his experiences in the afterlife and does not want to return. He is overwhelmed by intense feelings of joy, love, and peace. Despite his attitude, though, he somehow reunites with his physical body and lives.

Later he tries to tell others, but he has trouble doing so. In the first place, he can find no human words adequate to desciribe these unearthly episodes. He also finds that others scoff, so he stops telling other people. Still, the experience affects his life profoundly especially his views about death and its relationship to life [94 pp. 21-3].

The parallel between this and many OBEs should be clear. There is the tunnel travelled through as well as the experience of seeing one's own body from outside and seeming to have some other kind of body, and the ineffability is familiar. One is tempted to conclude that in death a typical OBE, or astral projection occurs, and is followed by a transition to another world, with the aid of people who have already made the crossing, and higher beings in whose plane one is going to lead the next phase of existence. Certainly this is the

sort of conclusion which many have drawn. Moody himself believes that his findings are indicative of survival, as does Kubler-Ross.

But before hastily taking Moody's research at face value, we should be aware of its many shortcomings, as Moody himself was (122b). Most obvious is that his cases were collected more or less as they came along and without any attempt at organized sampling. In presenting them in his books he selected those he wanted, and he made no attempt at any statistical analysis of the material. Therefore although his work gave a good idea of what dying could be like for some people, it did not begin to answer questions such as how common this type of experience is, how often the different features of the experience occur, and whether any come in clusters, are mutually exclusive, or happen in a specific order. Nor did he determine whether the nature of the experience varies with the dying person's state of mind, drug intake, prior beliefs or whatever. His impression that their religion did not affect the experience was based more on casual observation than on careful analysis.

More detailed research inspired by Moody's work is now under way, especially in the U.S.A. (see e.g. 51, 122b, 129). A society has been formed to bring together those interested in this research; the International Association for Near-Death Studies (IANDS) and the Association produces a magazine, *Anabiosis,* in which some of this research has been published. So we may now ask whether Moody's findings have been confirmed?

In general the answer is yes, but with some reservations and differences. First of all an idea of the incidence of NDEs has been obtained. Fred Schoonmaker, a cardiologist, has interviewed over 2,300 survivors of acute life-threatening situations since 1961 (132). Most of these had been treated in the cardiovascular unit where he worked and he was able to talk to them, informally, soon after their crises. He found that 60% reported experiences similar to Moody's and of those who did not a further fifth or so were prepared to discuss this sort of experience after repeated invitations and reassurances. This was not a properly selected sample, but Schoonmaker has argued that it can be considered representative; certainly he has gained by being able to interview the people soon after their experience, and regardless of whether they had anything to report. Sabom (see 122b) also interviewed patients among whom many had had cardiac arrests. Seventy-eight were interviewed prospectively, that is, they were

chosen only because they were known to have been close to death. Of these 42% reported an experience something like Moody's.

RING

The most detailed research has been carried out by Kenneth Ring, a psychologist from Connecticut (122a, b). From hospitals there he obtained the names of people (over the age of 18) who had come close to death or been resuscitated from clinical death, as a result of illness, accident or suicide attempt, and who were sufficiently recovered to talk about their experiences. Many suitable people were referred by the hospitals but there were few accident and suicide cases. Therefore advertisements were put out in the hope of attracting more. These asked for people who had come close to death, not mentioning whether they had had any 'experience' of any kind, but of course this is not an ideal sampling method. From all these sources Ring obtained 102 interviews. The respondents were asked for demographic information and for a free account of the near-death episode. Further questions were then asked about details such as those described by Moody, and followed by questions about any after-effects or changes in religious belief or attitudes.

Ring divided Moody's description into eleven recurrent components of what he called the 'core experience'. He then constructed an index, a weighted measure of the depth of the experience, and divided his respondents into three groups, non-experiencers, deep experiencers, and those between. Almost half of his sample (48%) reported experiences which were, at leaist in part, similar to Moody's description. This is probably an overestimate of the true incidence because the hospital referrals produced less (39%) than the self-referred cases, but this difference was not significant.

One of Ring's most interesting findings concerned the stages of the experience. He showed that the earlier stages also tended to be reported more frequently. The first stage, peace, was experienced by 60% of his sample, some of whom did not reach any further stages. One woman who had nearly died of a ruptured appendix said, 'I had a feeling of total peace ... I wasn't frightened any more.' Another had tried to commit suicide by throwing herself into the ocean and had been badly smashed on the rocks. Although she had been cold and shivering she said, 'I felt warm, safe, happy, relaxed, just every wonderful adjective you could use . . . This was perfection, this is everything anyone could possibly want. . .' It seems that

many could not find the words to describe their positive, relaxed, passive and happy state.

The next stage, of most interest to us here, was that of 'body separation', in others words the OBE. Thirty-seven per cent of Ring's sample reached this stage and what they reported sounds very similar to the many OBEs we have considered already. One young man who nearly died of a high fever said :

> I experienced this type of feeling where I felt I had left my body and I had viewed it from the other side of the room. I can sort of remember looking back at myself — it was scary of course . . . I can remember seeing myself lying there with a sheet and a hypothermia blanket on me. My eyes were closed, my face was very cold-looking . . . It was like I was perched right up on a little level over near the side of the room . . . [122b p. 46].

A woman who had a very deep core experience described the OBE phase saying, 'I was up in the left-hand corner of the room, looking down at what was going on.' Another, who had had a severe car crash, was apparently able to watch and hear anything that was going on in the operating theatre. Later she told the surgeon what she had heard and he confirmed it. Of course, whether normal or paranormal hearing was involved is another matter.

Not all the 'body separations' were so distinct. Many of Ring's respondents simply described a feeling of being separate or detached from everything that was happening. Some seemed to be observing things as though from a distance, but didn't actually see their own bodies from the outside. Ring tried to find out about two specific aspects of these OBEs. First he asked whether they had another body. The answer seemed to be 'no': most were unaware of any other body and answered that they were something like 'mind only'. Only two described anything like another body and even then the body was incomplete. There was a similar lack of descriptions of the 'silver cord'. Not all the people were systematically asked about a connection between themselves and their body, but of those who were, none described anything like the traditional cord.

So we can see that an OBE of sorts forms an important stage in the near-death experience; but it does not seem to be much like the traditional astral projection. The experience consists of feelings of detachment and viewing the scene as though from above; but it is not combined with any sense of having an astral body, or being connected by a silver cord. Nor were distinct feelings of separation

and return described by Ring's subjects. Nonetheless Ring equates these experiences with other OBEs and is of the opinion that these first two phases of the near-death encounter are best explained by supposing that consciousness does separate from the physical body.

After the OBE stage comes 'entering the darkness' experienced by nearly a quarter of Ring's subjects. This is equivalent to Moody's travelling down a dark tunnel, but in Ring's research only nine people described anything like a tunnel. More frequent were descriptions of 'a journey into a black vastness without shape or dimension'. It was described as 'a void, a nothing', as 'very peaceful blackness' and as 'soft velvet blackness'. One cardiac arrest victim said, 'Well, it was like night. It was dark. It was dark. But it was like, like [pause] like in the dark sky. Space. Dark. And it was - there weren't any *things* around. No stars or objects around.'

There were, however, some descriptions of tunnels, funnel, pipe, culvert, and drum. One young woman who had a near-fatal asthma attack said:

> I do remember thinking to myself that I was dying. And I felt I was floating through a tunnel . . . When I say *tunnel,* the only thing I can think of is — you know, those sewer pipes, those big pipes they put in? It was round like that, but it was enormous. I couldn't really see the edges of it; I got the feeling that it was round. It was like a whitish color . . . I was lying on my back. I was just floating. And smoke or white lines or something were coming this way [toward her] and I was going the opposite way [122b p. 54].

In the literature on astral projection, it is usually claimed that the tunnel represents the separation from the body; that the astral body leaving the physical creates the tunnel sensation. By contrast, in Ring's scheme the tunnel, when it occurs, is in the stage *after* the OBE. He does not state whether in most cases the tunnel came before or after the OBE, but he does give one account in which an old lady had an OBE before walking through a 'big water culvert' to 'see what's on the other side'. This evidence does seem to conflict with the traditional interpretation of the tunnel, but fits with Ring's interpretation of the tunnel as representing a shift of consciousness from one level to another.

Many people saw nothing but blackness and no light at the end, but for sixteen the next stage was reached, 'seeing the light'. The light was sometimes at the end of the tunnel, sometimes glimpsed in the distance but usually it was golden and bright without hurting

the eyes. Sometimes the light was associated with a presence of some kind, or a voice telling the person to go back. The same woman who had walked through a culvert had another experience in which she saw Jesus Christ in the centre of a golden, yellow light. He spoke to her and then disappeared. She did not want to tell anyone but her husband about her vision in case she was thought mad.

Finally there were a few experiencers, ten in all, who seemed to 'enter the light' and pass into or just glimpse another world. This was described as a world of great beauty, with glorious colours, with meadows of golden grass, birds singing, or beautiful music. It was at this stage that people were greeted by deceased relatives, and it was from this world that they did not want to come back. Some, like this man who nearly died after a tooth extraction, described it as heaven.

> I took a trip to heaven. I saw the most beautiful lakes. Angels —they were floating around like you see seagulls. Everything was white. The most beautiful flowers. Nobody on this earth ever saw the beautiful flowers that I saw there ... The lakes were blue, light blue. Everything about the angels was pure white [122b p. 61].

One overwhelming impression which comes from all these descriptions is that the experiences described were pleasant. None of Ring's respondents went to anywhere which could be called 'hell' and many struggled to find words strong enough to convey their positive emotions. Sabom and Kreutziger also emphasize that their patients experienced calm and peace during-the NDEs, regardless of the type or intensity of the physical crisis (129).

The major difference between Ring's and Moody's descriptions concerned the 'being of light'. None of Ring's subjects described this being although many experienced elements of it. Nor did they recount *both* sensing a presence *and* meeting with spirits. In Ring's opinion the two might serve the same purpose, indicating the choice of staying or going back, and so both are not necessary.

In addition, Ring tried to find out whether it makes a difference how one (nearly) dies. There were some sex differences here; but in general it seemed that illness victims were most likely to have near-death experiences, accident victims next, and the suicide cases least likely. The suicide cases were the most difficult to interpret but Ring concluded that their experiences tended to be aborted or damped down and the later stages were reached less often. He also looked

at various demographic variables and summed up that effect as 'negative'. As far as religious belief is concerned he came to the conclusion that a person's prior religiosity might determine the interpretation placed on the experience but it would not alter the likelihood or depth of that experience.

Finally Ring looked at the changes which occurred to people who had near-death experiences. Typically they felt reborn into a life with more meaning and purpose, and the values of love and service to others became more important than material comforts. Religion often seemed more meaningful and death was no longer to be feared.

NOYES AND KLETTI

A completely different kind of analysis was applied by Noyes and Kletti (100, 101b) to accounts collected from victims of falls, drownings, accidents, serious illnesses, and other life-threatening situations. They emphasized such features as altered time perception and attention, feeling of unreality and loss of emotions, and the sense of detachment. They found that these features occurred more often in people who thought they were about to die than in those who did not. This fitted their interpretation of the experiences as a form of depersonalization in the face of a threat to life; that is as a way of escaping or becoming dissociated from the imminent death of the physical body.

Interestingly, their cases seem rather different from those we have heard about so far. One racing driver who had a serious crash described how he seemed to leave reality and move into another world where he could see things '. . . more clearly and distinctly than at any time in my life.' But he also added, 'The whole experience was like a dream.' whereas a dream is just what it has *not* been like for so many other people. Others described how time slowed down, emotions became flat, and they observed things from a distance, but none of the descriptions sound much like Moody's or Ring's. OBEs are mentioned too, but for Noyes and Kletti these are just another way of dissociating the self from the threat of annihilation of the body. 'Accounts in which this out-of-the-body experience is a very prominent feature,' they add, 'usually do not contain the other phases described, suggesting that it may by itself represent an adequate defense against the threat of death.'

Is the OBE, then, nothing more than the dying person's last ditch

attempt to deny that it is he who is about to die? The idea is not new. The psychiatrist Jan Ehrenwald (34) had previously suggested that the OBE derives from the age-old quest for immortality and the need to deny death. Actually there is little evidence that this is right. It seems too far-fetched to extend that explanation to all OBEs of healthy people; and to say that it involves denial of death is far from a satisfactory explanation of a complex and many-sided experience.

Two other aspects have yet to be dealt with. First, there is the absence of any trips to 'hell'. Neither Moody nor Ring obtained any accounts of hellish experiences. Sabom found none; Osis and Haraldsson, only one. However, another cardiologist, Maurice Rawlings (121) has suggested that the reason is that although patients may recall such hellish experiences immediately afterwards, they tend to forget them with time. In other words, their memories protect them from recalling the unpleasant aspects. According to Rawlings it is only because they have been interviewed too long after the brush with death that all the experiences are reported as pleasant.

It does seem to be the 'good' side of experiences which makes the greater impact. For example George Ritchie, an American psychiatrist who nearly died of pneumonia in his youth, describes how he left his body, already covered by a sheet, and travelled across the USA. He was guided by a bright being whom he recognized as Jesus, and was shown scenes of human misery and hell. But it was his vision of a heavenly city and the presence of Jesus which he carried with him through his life (123).

So is this forgetting important? Other researchers have interviewed patients immediately after their experiences and found no hellish ones, and Rawlings does not provide the comparison of interview delays that is required, so his contentions cannot be fairly evaluated (see 122b, 128). However, at least it can be said that a hell-like experience near death is very rare.

Another feature which needs mention is the 'life review'. It has often been found that a person close to death may seem to see scenes of his past life pass before him as though on a screen, or in pictures. In some of Moody's cases the 'being of light' was apparently responsible for the review. Heim (101a) found that many victims of falls saw their lives flash before them and similiar experiences have been reported by Grof and Halifax (53) in their work giving LSD to dying patients. Ring found that about a quarter of his core-

experiences reported a life review, and that it was more common in accident victims than others. He suggested that the suddenness of the crisis may be important in setting offf the memories. Noyes and Kletti (101b) also report that 29% of a sample of 205 people faced with life-threatening situations, claimed to have experienced a life review. For example one young boy who accidentally shot himself described how:

> ... my attention became riveted on memories of my early life. They began when I was about three and continued up to the present. I saw myself in a high chair at age three. I was with my father under a bridge when we caught a prize paddlefish. I saw myself with friends. The memories were pleasant but made me sad, realizing that this was the life I was leaving [101b p. 22]

Theories about the origin of the life review have probably been more varied than about any other aspect of the near-death experience. Ring uses an overstretched analogy with the hologram to interpret the life reviews as initiated by the 'higher self operating at a level where information is stored holographically, and experienced holographically - all at once. To some the life review represents the day of judgement or of self-judgement and to others a reorientation to the past in recognition of the absence of any future. To Siegel the panorama is most like the sort of hallucination produced by central nervous system arousal (137b, c).

Just as many different interpretations have been presented for all aspects of the near-death experience. The most important of them have been usefully summarised by Grosso (54b). Most people seem to agree that the near-death experience presents remarkable consistency varying little across differences in culture, religion, and cause of the crisis; what is in dispute is why. Rawlings steeps all his findings in the language of Christianity, involving heaven and hell and the possibility of being saved. Noyes interprets near-death experiences in terms of depersonalization; Siegel, in terms of hallucinations and Ring, within a parapsychological-holographic model.

But broadly speaking there are two camps. On the one side are those who see the near-death experience as a sure signpost towards another world and a life after death; on the other, those who have, in various different ways, interpreted the experience as a part of life, not death, and as telling us nothing whatsoever about a 'life after life'.

One thing I can say with certainty is that neither side is demonstrably and unambiguously correct. Those who argue that the near-death experience tells us what death is like have taken a jump into the unknown, for they have assumed that near-death experience is continued into death experience, and in this they may or may not be justified. But those who say that the near-death experience is an experience of this life are also taking a leap from known facts. They are claiming that the NDE and the OBE can be accounted for in terms of psychological or physiological processes, but they have not yet proven their case. It is to explore this approach in more detail that I shall now turn to some related experiences found in psychiatry and psychology to see just how much they can further our understanding.

15 The Double in Psychopathology

If the **OBE** is to be seen as involving psychological processes, rather than paranormal ones, we need to look at what those processes could be. There are essentially two ways of doing this : to liken the **OBE** to pathological states found in mental illness, or to see it as a natural extension of normal psychological processes. I shall begin with a psychiatric approach and ask whether the OBE, or anything like it, is found as a symptom in any mental illness.

Certainly many people who have had OBEs, Muldoon among them (97a), have thought that their experiences signified incipient madness. Is there any justification for this fear? If so one might expect to find a voluminous literature in medicine and psychiatry which could help us to understand the experience. A statement by Lhermitte, made in 1951, sounds encouraging. He says, 'the apparition of the double should make one seriously suspect the incidence of a disease' (82). However, one only has to look a little further to find that many of the experiences reported as hallucinations of the self, doubles or 'autoscopy', bear little relationship to the OBE as we have been considering it so far. Nevertheless, in their very differences these may help to put the OBE into perspective and so I shall say a little more about them.

DEPERSONALIZATION AND DEREALIZATION

In the last chapter we saw that Noyes and Kletti (101b) likened near-death experiences to the phenomenon of depersonalization. Related to depersonalization is derealization, in which the surroundings and environment begin to seem unreal and the sufferer seems to be cut off from reality. Depersonalization is the more common of the two, and involves feelings that the person's own body is foreign or does not belong. He may complain that he does not feel emotions even though he appears to express them, and he may suffer anxiety, distortions of time and place, and changes in his body image. It is even said

that 'doubling' may occur and the subject seem to observe things from a few feet ahead of his body (41). His conscious !I-ness' is said to be outside his body but although this sounds very much like an OBE, the other symptoms do not.

Noyes and Kletti quote an early description of depersonalization from Schilder (101b).

> To the depersonalised individual the world appears strange, peculiar, foreign, dreamlike. Objects appear at times strangely diminished in size, at times flat. Sounds appear to come from a distance. The tactile characteristics of objects likewise seem strangely altered. But the patients complain not only of the changes in their perceptivity but their imagery appears to be altered. The patients characterise their imagery as pale, colorless, and some complain that they have altogether lost the power of imagination. The emotions likewise undergo marked alterations. The patients complain that they are capable of experiencing neither pain nor pleasure, love and hate have perished within them. They experience a fundamental change in their personality, and the climax is reached with their complaints that they have become strangers to themselves. It is as though they were dead, lifeless, mere automatons [p. 25].

Does this sound like a description of someone who has an OBE or a near-death experience? In spite of what Noyes and Kletti say, I think not. Yes, there are distortions of the environment and alterations in imagery; but from all we have learned so far it seems that imagery becomes more bright and vivid, colourful and detailed, rather than pale and colourless. There are changes in the emotions - but rather than a perishing of love and hate, many OBEers report deep love and joy and positive emotions more profound than they ever experienced before. Finally I do not think that many people who have had an OBE or NDE would say they felt 'dead, lifeless, mere automatons'. Rather, they say, 'I had never felt so alive before in all my life'. All this leads me to conclude that the phenomena of derealization and depersonalization do not in the least help us to understand the OBE. Any small similarities are outweighed by overwhelming differences.

DOUBLES

One syndrome specifically involving doubles is the unusual 'Capgras syndrome' (36). Originally described by two Frenchmen, Capgras and Reboul-Lachaux in 1923, it was called 'L'illusion des sosies' or the illusion of doubles. A person suffering from this illusion may

believe that a friend or relative has been replaced by an exact double. Since this double is like the real person in every discernible way, nothing that the 'real person' says or does will convince the patient otherwise. It has been suggested that the illusion may represent an extreme solution to a problem of ambivalent feelings. In this way the patient can avoid the guilt he feels at any malicious or negative feelings towards a loved one. But from even this very brief description, I think it is obvious that this illusion bears no resemblance to the OBE.

More relevant may be the kinds of double seen in autoscopy, literally 'seeing oneself. As an example Lukianowicz (85) reports the case of an architect who experienced his first autoscopic hallucination five years after he began to have epileptic fits. While discussing some plans with his builder he suddenly stopped talking, looked up towards the door and ignored the builder's questioning. He had apparently seen a tall man, dressed in a replica of his own suit, come through the closed door and towards his desk. He was semi-transparent, but otherwise the only difference between him and the architect himself was that he did not have the man's limp. The phantom approached and then seemed to melt into the man. He said, 'I felt as if all my life left my body and went into him'. Finally the two separated again and the double disappeared the way he had come, through the closed door, but this time he too was limping. At the double's departure the architect leapt to his feet to check that the door was really closed. He tried to continue his work, but had to have a rest before he felt fit to carry on.

The first thing to note about this case is that the subject did not describe any sense of leaving his physical body. Instead he saw a copy of himself, or double, while 'he' remained where he was. Here is the distinction between an OBE and autoscopy, or seeing one's double. In the sense that I shall use the terms an OBE involves the feeling of being outside the body while autoscopy usually consists of seeing a double which is outside the body. Colvin (22) has treated the two as distinct and suggested that autoscopy more often occurs when the person is standing while OBEs occur when reclining. The form seen in autoscopy is incomplete while in the OBE it is complete and vision is clearer. So can we confidently reject autoscopy as separate from OBE ?

The term 'autoscopy' has been defined many ways. Towards the end of the last century Fere referred to a physician who saw his

image as though reflected, and used the term specular, or autoscopic, hallucination. In 1935 Menninger-Lerchental criticized previous terms and preferred to see the phenomenon as a false perception of one own form and suggested the term 'heautoscopy', a term preferred by Damas Mora and his colleagues on the grounds that the autoscope is an instrument for observing one's own eye and so is likely to lead to confusion (27). However, the term 'autoscopy' is widely used and easy to understand, so I shall use it here. As for definitions, Critchley defined autoscopy as 'delusional dislocation of the body image into the visual sphere' (25). To include a wider range of experiences Lukianowicz suggested 'a complex psychosensorial hallucinatory perception of one's own body image projected into the external visual space' (85).

It is clear that all of these definitions are describing something other than an OBE; but others include the possibility of either seeing a double or an OBE. For example Damas Mora defined heautoscopy as 'the experience of seeing one's own body at a distance' or as 'the experience of duplication of one's real self, and Lippman as 'hallucinations of physical duality' (83). All these could encompass both types of experience. So are OBEs included or not? This is actually hard to say, for the OBE is rarely discussed at all. We may have to look deeper into the phenomenon of autoscopy to find out whether they and the OBE are both aspects of the same underlying pathological problem, or whether they are entirely different, but first I should say that I am going to use the term autoscopy as though it did not include the OBE, so as to keep the two distinct.

Although the OBE is rarely distinguished from autoscopy in the psychiatric literature, other distinctions are made instead. If the double is different in appearance from the person, the experience may be called deuteroscopy. There are other forms of heautoscopy: some people see the whole of their body as a double; some see only parts, perhaps only the face. There is an internal form in which the subject can see his internal organs; and a cenesthetic form in which he does not see, but only feels the presence of, his double. There is even a negative form in which the subject cannot see himself even when he tries to look in a mirror.

Damas Mora and his colleagues have distinguished heautoscopic depersonalization and heautoscopic delusion. They give an example of the delusional form suffered by a schizophrenic subject who felt he also existed outside himself. He was quite sure his double went

with him everywherej but he never saw him or heard him. They also present a case of the more common form, concerning a man who was admitted to hospital after the police had found him one night in his pyjamas in the river. He had seen his double dressed in a long German military trenchcoat. This double spoke to the man in German, a language he did not know, and called him to follow. The man then followed his own double into the river to save him from drowning, whereupon the double disappeared.

These experiences have been labelled as hallucinations, but there is even dispute about this. Does an inability to see something which is there count as an hallucination? And is it necessary that the person be convinced that the vision is real, or only that he sees it? If an hallucination is defined as 'perception without a corresponding object' then someone who sees a double can be said to be hallucinating-unless an astral or etheric body is really there! But other definitions specify that the subject must be convinced that what he sees or hears is really there, and is not imagined, for the experience to count as an hallucination. On this definition many forms of autoscopy would be called pseudo-hallucination since the subject is quite capable of questioning the reality of the vision and even concluding that it is an hallucination.

So we can see that there is much confusion about how to describe many of these phenomena. But there is a little more certainty about some of the conditions associated with them. These include epilepsy and migraine, toxic confusional states in typhus and influenza, certain cerebral lesions, alcoholic and other drug intoxications, schizophrenia and depression, to name but a few. Of course some of these are well-defined physical problems while others are themselves only names covering a variety of symptoms - syndromes. Autoscopic phenomena have themselves been considered as both a symptom in other syndromes and as a syndrome in their own right.

Roughly speaking the phenomena can be divided into those secondary to psychiatric disorders; those associated with brain pathology; and those of idiopathic origin, i.e. not associated with any organic disorder. Theories about them have fallen into these three categories, and I shall consider each of them; but they are not mutually exclusive, and there is a great deal of overlap. We must remember, too, that the OBE has rarely been mentioned and so it is hard to find out how much these theories can help us. Nevertheless I think

they will have some value in our search for ways of understanding the OBE.

Psychoanalytic Theories of the Double

Psychoanalytic theories began with Otto Rank's analysis of the double as a kind of scapegoat for the guilt which a person could not accept (119). Following Rank, psychoanalytic accounts of the double became popular and Black (8b) has reviewed some of their applications to the OBE, but they were most used in accounting for the appearance of doubles in poetry and literature. In the work of Maupassant and de Musset, Poe and Kafka, Dostoevsky and Wilde, one comes across the phenomenon of the double. The self has another self who follows him around, taunts or jeers at him, or takes on his sins or his mistakes. In 1934 another psychoanalyst, Coleman, (21) suggested that like shadows or familiars the double was of essentially libidinous origin, that it expressed deep sexual desires, and was in fact ultimately a personification of the phallus. In the case of Dostoevsky he suggested that the double expressed his own disharmony and resulted from his schizoid personality. Whether one finds such an 'explanation' satisfactory is largely a matter of opinion. Perhaps the fact that one rarely finds this kind of explanation in recent years indicates that others beside myself have found it less than convincing, but perhaps it should not be dismissed altogether. What of that very different kind of split found in Dr Jekyll and Mr Hyde; the charming and sincere, and the cruel and devious, sides of the same man? Why should Stevenson have chosen this tale? Was it just a powerful way to illustrate our dual nature, or did he have some particular experience which led him to write about a double?

The stories of Guy de Maupassant provide more fertile ground for speculations since Maupassant himself suffered from hallucinations, though whether they were because of some hereditary conditions or were a symptom of syphilis is uncertain. Todd and Dewhurst (149) claim that his hallucinations cannot be dissociated from the dementia paralytica from which he eventually died. Of his friend Bourget he apparently asked, 'How would you feel if you had to go through what I experience? Every other time when I return home I see my double. I open the door and see myself sitting in the armchair. I know it is an hallucination the moment I see it. But isn't it remarkable? If you hadn't a cool head wouldn't you be afraid?' It seems that his realization that it was an hallucination had no effect upon it.

In 1887 Dr Sollier reported, 'As he was sitting at his table in the study, he thought he heard the door open . . . Maupassant turned round, and was not a little astonished to see himself enter, sit down in front of him, with his face in his hands, and begin to dictate exactly what he was writing' (21). Ultimately Maupassant's health deteriorated and along with it his writing; in 1892 he went into an asylum at Passy where, in 1893, he died.

If it is clear that Maupassant's own visions gave rise to his writing about doubles, it is not so clear why he saw doubles in the first place. Coleman suggested that the double was a convenient device for giving vent to his intrapsychic conflicts, and concluded that Maupassant's double was 'a projection of the sex-libido as enemy and destroyer'. On the other hand Todd and Dewhurst have pointed out the significance of Maupassant's narcissism - his excessive concern with himself. Narcissism may take the form of fascination with one's appearance, or vanity about it, or hypochondriacal fears about one's health; Maupassant reputedly exhibited a morbid horror of dying and a pride in his sexual exploits and mastery of women and perhaps all this was a factor in his seeing doubles. If the illness from which he suffered was sufficient for him to see hallucinations, his fascination with himself may have been enough for his hallucinations to be of himself

Other narcissistic writers have used the symbolism of the double. The poet D'Annunzio described his own dramatic autoscopic hallucination in his poem 'Notturno'. It is said that he used to gaze on his reflection with fascination and dressed and perfumed himself with great vanity : in this form he had a disturbing vision of himself many years older, alternating with one of himself at sixteen with thick black hair, a smooth forehead and an expression of 'indescribable purity'.

Was a similar inspiration behind Oscar Wilde's *The Picture of Dorian Gray* in which the portrait painted in the hero's youth showed him as he was, a handsome, and well-dressed young man? While leading a life of ever greater sin and depravity, he retained his youthful expression and innocent face; it was the portrait which took on the horrible appearance of an aged man racked by years of evil.

Physical Disorders and the Double

An entirely different way of looking at autoscopy is through the

physical problems with which it is sometimes associated. One of these is migraine, the most obvious symptom of which is the debilitating headache. This is sometimes associated with nausea and vomiting, and preceded by sensory disturbances or the so-called 'aura'. Tunnel vision or partial blindness may occur and a common effect is the 'fortification illusion', consisting of patterns of zigzag lines. During, before or after the pain some migraine sufferers apparently experience autoscopy.

Lippman (83) gives several case histories of 'hallucinations of the self in migraine sufferers, some of which seem to have involved OBEs. As he asked them to describe their experiences in their own words it is rather easier to discern what actually happened to them. One example was described by a 37-year-old housewife with three children. Like all Lippman's patients she was intelligent, busy and adequate to the world around her, normally sexed, and with no signs of neuropathic or psychopathic inheritance. She had suffered from a one-sided headache with nausea and vomiting since childhood.

> Until... five years ago, I felt the queer sensation of being two persons. This sensation came just before a violent headache attack and at no other time. Very often it came as I was serving breakfast. There would be my husband and children, just as usual, and in a flash they didn't seem to be quite the same ... I felt as if I were standing on an inclined plane, looking down on them from the height of a few feet, watching myself serve breakfast. It was as if I were in another dimension, looking at myself and them. I was not afraid, just amazed. I always knew that I was really with them. Yet, there was 'I', and there was 'me' — and in a moment I was one again! (83 p. 346).

Another of Lippman's patients, a housewife aged 44, married and with one child, described this fascinating experience :

> Sometimes during a severe headache I have had the impression that my body was vibrating and moving like a very fast pendulum from myself on the left to a supposedly 'other self on the right, although I knew my own body was not moving. It was like watching Disney's 'Pluto The Pup' running at full speed toward an open gate, having it close, and he would collide with a solid object. His body would 'z-z-z-ing-g-g-' and vibrate from side to side until the force of the blow was over. I seemed to look at the 'other self on the right as though it were not part of me, and when the 'zing' motion stopped, I think we were still apart (83 p. 347).

This case is especially interesting because it sounds so very much like

all those shaking and vibrating feelings which so many OBEers have described. Yet this woman did not have a typical OBE. The other part of herself did not seem part of her. So this seems to indicate a similarity, in the vibration feeling, between autoscopy and OBEs. Another interesting feature of this case was that this woman, like so many who have OBEs kept the experience to herself in case she was thought 'queer'.

For all these similarities, however, most of Lippman's other cases described experiences very unlike OBEs. In any case, a number of examples of people who have suffered both migraine, and autoscopy or OBEs, does not prove any particular kind of connection between the two. In many of Lippman's cases the experiences occurred in close proximity to the headaches, but on the other hand there is no evidence that migraine sufferers are more likely to have OBEs. After all, both migraine and OBEs are quite common and so a large number of people who have both would be expected. What we need to know is whether this number is larger than would be predicted by a chance association. The only evidence on this comes from a small survey carried out by Irwin among Australian students (65c). He found no relationship between OBEs and migraine.

Perhaps the most helpful theoretical approach has been to look firstly to the conditions facilitating hallucinations in general, and then to the specific factors which might tend to make those hallucinations be of the self rather than anything else. We have already seen that a large number of factors facilitating hallucinations have been implicated in autoscopy. Todd and Dewhurst (149) have noted that autoscopy often occurs in those with 'supernormal powers of visual imagery', but since the whole topic of imagery is so important I shall discuss it in much greater detail in the next chapter.

Given there is a predisposition towards hallucination why should it take the form of oneself? One possibility, as we have already seen, is undue narcissism. From a psychoanalytic point of view Rank interpreted autoscopy as a projection of the narcissistic libido: that is, a sexual desire towards oneself projected outside one's own body (119).

Archetypal thinking has also been implicated. The idea is that under certain conditions some individuals revert to a kind of primitive thought, and among the ideas they may be prone to accepting is the idea that we all have two selves, or even more than two. Implicit in this view is that the idea is not only primitive but also wrong;

but we have not yet ruled out the possibility that it is essentially correct.

Finally, one of the most interesting aspects here is the relationship of autoscopy to the development and maintainance of the body image. We each of us have an image of our own body. We learn to put this together from all our experience of perceiving things, touching them, seeing them and so on, and from all our interactions with the objects around us. We learn where our hands are, what they look like and how far they can reach. This image is essential for all activities because in order to grasp or throw something, to put the foot unerringly on the brake rather than on the accelerator, we need to know where our hands and feet are, and all this information is integrated into the body image. It is easy to see that if the body image is distorted it will lead to a change in the perception of self, and in combination with other factors could lead to there seeming to be two selves.

There are many types of distortion, and many causes of them. Pain can cause apparent growing of the affected area, and even hunger or thirst can affect it. In skilled activities a paintbrush, chisel, or even a car, can seem to be an extension of one's own body. A familiar distortion is the phenomenon of the phantom limb. After the amputation of an arm or leg the image of that limb seems to persist and can even seem to be in pain or to suffer from cramp. Some have interpreted this in terms of the persisting astral arm or leg but there are far, more convincing explanations in terms of the effects on the peripheral nerves, and on the body image. Certain areas of the brain are known to be associated with the integration of the body image and if these are damaged permanently, or temporarily as when there are epileptic discharges, then distortions of the body image result (15, 25).

Todd and Dewhurst described a woman who suffered from epilepsy and migraine and was troubled by all sorts of disturbances in her body image. Her legs might become shorter, or not seem to be there at all, and she would have to look in a mirror to reassure herself. Then she seemed to have an extra arm. She could feel it lying along the top of her real arm, and could see it wearing any sleeves the real arm wore. It seemed so real that she would try to hide it away behind her back in case someone saw it, and yet she knew it was a product of her own fancy. These strange experiences were associ-

ated with a disturbance affecting part of the right parietal lobe of the cortex.

As well as representing the position and form of the body, the body image is associated with that sense of belonging, or being 'my' arm or head. In some cases of autoscopy the double does not seem to belong at all even though the person knows he is seeing another copy of himself. This happens too in OBEs, although not so commonly. Sometimes the OBEer looks on the physical body below as somehow distant and not important or related to himself, the real self.

These are just some of the factors which have been implicated in the study of autoscopy. But does this help us to understand the OBE? Not, it seems, directly. The differences between autoscopy and the OBE are at least as significant as the similarities. However, we are perhaps left with some pointers. We should try to find out whether OBEs occur to people who are prone to hallucinations or who have especially good imagery. Then, if the OBE is to be seen as a form of hallucination, we should try to see whether it shows any resemblance to the products of imagination or hallucination; finally we could ask why any hallucination should take this form rather than any other. We might find that this line of enquiry will lead to our understanding the OBE better, or that it is a dead-end. Accordingly I shall turn next to the phenomena of imagination and hallucination, to see how they are related to the OBE.