

of last century have removed the conditions which gave rise to luminous phenomena, and they have practically ceased to occur in built-up areas today.

Cloudy effects by themselves, without any luminous accompaniments, are very local and peculiar. The descriptions (see e.g. cases (7), (8) and (9) above) indicate that for some reason the clouds behave as though they were dense and rather heavy. When shaped by a vortex, they seem to tend to throw out 'arms' near the top (cases (5) and (10)). It may be an incipient 'mushrooming' process. It may be objected that they could not occur indoors. Heavy mists certainly form, over water, in sewers, and if they happened to be forced up into buildings by a rush of air during a rain storm flooding the sewer or drain, such clouds might well persist in visible form for a short time. They never seem to last long (see case (9)). That they are sometimes accompanied by a vortex is shown by case (7), an indoors instance, and by case (5), where the figure in the yard had a whirl of dust and small bits of paper at its 'heels'.

Returning now to Beavor Lodge, the incidents said to have happened there no doubt did happen as described. But it is a reasonable assumption that they were purely physical events, due to conditions all too common at that time. The prevalent belief that they were 'ghostly' events led to the search for causes in the past history of the place. Mrs Richmond herself, who had made some enquiries, could only find as previous tenants 'an old invalid lady', a former Vicar of Hammersmith named Atwood, and two other families named Scott (1804) and Seaton (about 1870). In 1884 (*Phantasms*, III, 116) she seems not to have heard the more lurid tale of coiners, an informer and a murder mentioned by Sir Arthur Richmond, a story which Mrs Stirling, in *Ghosts Vivisected* attributes to Mr George Richmond (op. cit., p. 165).

Such stories, even if true, would fall very far short of 'explaining' the events reported, and it seems unnecessary to examine them. In conclusion it is perhaps worth observing that the 'grey lady' of Beavor Lodge 'walked' at just about the same time as the 'widow' of Garden Reach, Cheltenham, better known as the Morton Ghost. Perhaps they were both made of the same kind of 'stuff', as both were seen by several different observers.

I am grateful to Sir Arthur Richmond for permission to quote from his book, and to the Council of the Society for permission to quote from *Proceedings* and from the Society's archives.

A POSSIBLE 'PSYCHIC' DREAM,
WITH SOME GENERAL SPECULATIONS
ON THE NATURE OF SUCH DREAMS

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THE following case is reported for two main reasons. Not only was it obtained under very good evidential conditions, it also has certain features which, *assuming* some form of E S P was operative, suggest how our understanding of 'psychic' dreams¹ may be aided by the results of recent experiments on the psychology and physiology of nocturnal dreaming.

The case was reported to me by an old friend from college days, who shall be referred to as Mr A. I have checked the dream narratives reported by him against the original tape recordings of the dreams, as well as interviewed all the persons involved in the case, and am satisfied of the accuracy of their testimony.

Mr A is an electrical engineer, living in the eastern part of the United States. Both he and his wife, Mrs A, had spontaneously recalled their dreams frequently and in much detail since childhood, and consequently had been interested in the psychology of dreams for some years prior to the events described below. As a result of this interest, and of the interest shown by another psychologist² and myself in collecting long dream series, they had decided to tape record their dreams upon awakening in the morning for a period of a few months in order to obtain a large sample of the kinds of events that happened in their 'dream worlds'. They had been doing this routinely for several weeks prior to the events described below.

On 24 June, 1963 Mr A had been planning a trip he was to make the following morning to X, a city about 113 airline miles distant from his home, in order to purchase a new automobile, at what he thought would be a better price than he could get in his home town. Mr and Mrs A had been planning this purchase for several weeks,

¹ In this paper the term 'psychic' dream refers to any dream which contains information which could presumably be known to the dreamer only through some form of E S P.

² Dr Calvin Hall of the Dream Research Institute, Coral Gables, Florida, had asked Mr and Mrs A, through me, to provide him with a sample of their dreams in order to study possible formal similarities of the dreams of a husband-wife pair of dreamers. These analyses will probably be eventually published, with Mr and Mrs A referred to under the pseudonyms Rolfe and Melora.

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and, as a result of some rather frustrating mechanical difficulties with their previous automobile, were very involved in this prospective purchase. As Mr A fell asleep on the night of the 24th, at his usual bedtime, he was preoccupied with thoughts of purchasing an automobile, and of seeing his in-laws, the Bs, particularly his sister-in-law, Miss B, a girl of 18 of whom he was quite fond. His preoccupation with these things resulted in his taking some time to fall asleep, which, Mr A reports, is quite unusual for him.

When Mr and Mrs A awoke in the morning, Mrs A left their bedroom to prepare the children's breakfast, as usual, while Mr A tape recorded whatever dreaming he recalled. Considering the distance between the bedroom and the kitchen, and the noise made by the children and the preparation of breakfast, Mrs A could not normally hear what Mr A was dictating.

Shortly after Mr A finished recording his dream and left the bedroom, Mrs A returned there and recorded her dreams. Mr A, however, walked past the bedroom door while Mrs A was recording and overheard part of her dictation. He was impressed with some apparent parallels to his own dream, so he called out to her to record her dream in as much detail as she could, as it seemed to parallel his own dream. He was careful, however, to say nothing else, so as not to influence her narration, and he then left the vicinity of the bedroom until Mrs A had finished recording her dream.

Mr and Mrs A's dreams are presented below. The dotted lines indicate material I have deleted for the sake of brevity, as it did not seem relevant to the question of parallelism. The lines of the narratives have been numbered to facilitate later reference. These transcriptions are verbatim, except for the disguising of names and places.

Mr A's dream:

'Fairly vivid dream. It started out with my being in my father-in-law's office. . . . He and I then left. We went down in the elevator, somewhere between 8 and 4 stories down, and got off and went out of the building. I believe we were going to go back to his home in X, but when we got outside the building and closed the door, for some reason he wanted to go back into the building again, up to his office. But the door we just came out of was locked. So we went around to the rear of the building and there was a drop of 8 or 9 feet onto a lower level where there was some construction going on, right behind the building. We both jumped over the fence. He jumped down and then I jumped down

also by pushing myself over the edge, holding on, and then letting go and dropping down. There was a board fence, too, right along the edge where we dropped down, and I followed him over the slightly muddy ground and went into a back door. Then what happens here is somewhat confused. But we started up on the elevator and there were some confusing things, I don't recall exactly, of getting on and off the elevator several times, and the elevator not exactly lining up with the floor levels at which it stopped, and some things of this nature.¹ But then what happened was that I got off the elevator, following my sister-in-law, who is about 18. I don't know what happened to my father-in-law at this point. My sister-in-law and I were apparently making some kind of game about going up the stairs the rest of the way. I was following along a little ways behind her, and she got well ahead of me and a little bit out of sight, and I became worried over this. I hurried up the stairs after her, because I think at this point I began having some fear that she committed suicide or something to that effect. So I ran upstairs, and some other girl, (and I don't know how this other girl got in the dream, except that she was some friend of my sister-in-law's and was about her age), had hung themselves. Some other people appeared again at this point. I think my father-in-law was back in here again, and an unknown number of other people, and we got them down and started performing artificial respiration. . . . She recovered and her friend also recovered, and didn't seem any the worse for it. . . . The grief I felt over the potential suicide was quite intense in the dream. I was quite actively involved in it.'

After hearing Mrs A's dream report, Mr A immediately added the following details which he had not bothered to mention in his report:

'When I went into the back entrance of this building there was some construction going on around the building, and it was a relatively new building. The entrance I went into was something like a service entrance, where there were some pipes overhead on the ceiling, and it was kind of dirty from a lot of people going in and out right from this mud, and everything like that.'

¹ Although he did not record it immediately, Mr A is also certain that the elevator in his dream kept changing its shape and size as he and his father-in-law were riding on it in the dream.

Mrs A's dream:

'In my first dream I was in this old office building. I don't know exactly how high it was, maybe about 90 stories, and I was down in the coffee shop in this building. I had a job in this building. It was on the 84th story. This was pretty important. There was one elevator in the building, and also a flight of stairs, and the elevator was a very strange elevator, because it had buttons in it just for a few of the stories, for the 3rd and the 9th and the 25th and a couple of others. But everything above that was unmarked. There were no buttons to push, and you had to work this strange contraption to get to the level that you wanted. I don't remember how I got up to this 84th story into this new job that I had, but I got up there somehow . . . towards the end of the day when I wanted to go home I noticed that there was nobody in the elevator to work it, and they said you were supposed to work it yourself. I didn't understand how to work it. I knew I would never work it right to get back down to the ground again. Also it took a fairly long time for this elevator. It was an old, rickety thing to get up all the way to the top and back again all the way down and back. So I walked around for a while and found this janitor and I asked him if he could run the elevator for me. We had quite a discussion about it, and he told me how to work it, and he told me he couldn't work it for me and he couldn't take the time unless there were 25 people going down. He took me to the elevator and showed me how it worked. There was a belt of some sort. If you pulled down on it you would go down. If you pulled up on it you would make the elevator go up. But, of course, you had to keep stopping and seeing if you were at the right place, cause there was no way of telling, because there was no indicator inside the elevator. As the elevator shaft was open, you could see all the way down it. The elevator itself was only this wooden platform held up by some ropes. When I tried to step on it, it got smaller and smaller, until it was just 2 or 3 inches across. So I didn't much want to get on the thing. I went into the lady's room and sat down on the couch and had a cigarette while I was thinking what to do. It was about 4.30. A bunch of people were there, waiting for the elevator. I didn't think it was safe to go on it, so I decided I would go down the stairs even though there were so many flights to go down. So I went out to the stairs and started going down, and almost before I knew it I was on the ground. It

100 seemed like I had come down maybe 10 flights, and I had found it hard to believe that I was on the ground level. I went out through some doors in the building. It was real new. There was a green one and some parking lots. And across the way a little bit another wing of the building, where the mechanics and people who worked in the building lived. It was strange that on this one side of the building it seemed so new, because it seemed such an ancient building when I first went into it. . . . I went inside a big door like a truck entrance. I found myself in this low, steamy tunnel that had pipes on the ceiling. The floor was damp, and it was very moist and steamy in there. . . . It gets a little confused after this, but at some time or other I was back upstairs again and going up on the 84th floor. Going down to the ground floor again. And this time a lot of other people were going down the stairs with me because I persuaded them it was faster than the elevator. Everybody was hurrying down just as fast as they could. . . .'

Both Mr and Mrs A were impressed by the parallelism of a number of elements in their independently recorded dreams, particularly the bizarre elevator. Although they were both fairly sophisticated with respect to the psychology of dreaming, and had often traced out reasons for their dreaming about particular subjects in the past, they had never previously found such striking parallelism in their dreams, nor could they think of any common experiences in their recent past which could plausibly account for this parallelism. Table 1 presents a summary of this parallelism, with line references to the two dream narratives. This parallelism will be referred to as the A-A' parallelism.

Although the A-A' parallelism is suggestive of ESP, alternative explanations are also plausible. E.g., despite their inability to discover it, there may have been a common life experience which triggered similar (unconscious) trains of association in Mr and Mrs A, resulting in the A-A' parallelism. Furthermore, Mr A has been known to talk in his sleep in the past, and if he sleep-talked about his dream or about the non-dreaming sleep thoughts that led up to his dream before dreaming it, he could have strongly influenced the course of Mrs A's (subsequent) dreaming. Both dreams could also be regarded as containing some sexual symbolism from a Freudian point of view, with Mr A also showing sexual attraction toward his sister-in-law, but this hypothesis does not seem to shed much light on the close parallelism in the *manifest* content. Another possibility is that Mrs A 'unconsciously' overheard part(s) of Mr A's dictation, with a consequent influence

TABLE I
PARALLEL DREAM ELEMENTS
(A-A' Parallelism)

Element	Lines in Mr. A's Dream	Lines in Mrs. A's Dream
Action takes place in an office building.	1-5	53-4
Mr A's '8 and 4 stories down', and Mrs A's '84th story. This was very important'.	3-4	56-7
Re-enter building by different entrance.	8-12 17-18	102 109
Different entrance is service entrance, has pipes overhead, is unpleasant (dirty and muddy in one case, moist and steamy in other).	17-18 46-52	109-12
Bizarre elevator: changes size and shape; difficult to control, to select level; dreamer gets on and off several times.	19-23 see footnote on page 285	57-64 69-74 81-91
Elevator travel unsatisfactory, dreamer uses stairs.	24-8	95-8 115-17
Dreamer hurries on stairs in company of at least one other person.	24-33	115-18

on her recollection of her dream. This seems rather unlikely, however, considering the clarity and definiteness of the recalled dreams.

Mr and Mrs A considered these explanations as they discussed the parallelism on the morning of the 25th, but did not feel that they adequately accounted for it. Since Miss B played a major part in the latter half of Mr A's dream, he decided to ask her about her dreams and activities on the 24th as soon as he saw her that afternoon in X, before telling her anything about his or Mrs A's dream.

When Mr A saw Miss B that afternoon in X, he immediately asked her what she had dreamed about the previous night (24 June), telling her that it was important that she recollect all that she could about her dreams. Miss B could only vaguely recall a dream, either about hanging someone or about being hanged. She could recall no other details.

Mr A then asked Miss B to describe her activities of the previous evening. As Mr A knew, Miss B and her parents, Mr and Mrs B (Mr A's father- and mother-in-law), had spent the previous evening in their vacation cabin, a place about 88 airline miles distant from X and about 170 airline miles distant from the home of Mr and Mrs A. Unknown to Mr or Mrs A, however, a friend of Miss B's, Miss C, was staying at the cabin with the Bs. Mr A

was not acquainted with Miss C. On the evening of 24 June, Miss B had tried an 'experiment' that Miss C had suggested to her. This 'experiment' had consisted of lying down and willing herself to die! Miss C had, by her and Miss B's report, tried this experiment of willing herself to die several days before the 24th, with the result that she had 'blacked out' for a few moments, then had gotten bored with the whole thing, and so arose and went about her business. Miss B tried this 'experiment' on the evening of the 24th but nothing happened, so after a few minutes she also got bored and gave it up.

Mr A then told Miss B about his and Mrs A's dreams, and then asked her to telephone Miss C and, without telling her anything about these events, ask her (Miss C) what she recalled dreaming about on the night of the 24th, while she was staying with Miss B. Miss C could only vaguely recall dreaming about being in a building that was under construction. Telling her about the dreams of Mr A, Mrs A, and Miss B did not aid her memory, and she could recall nothing else about her dream.

TABLE 2
PARALLELS BETWEEN MR A'S DREAM AND OTHER EVENTS
(A-B and A-C Parallelisms)

Element in Mr A's Dream	Other Events
Miss B hangs herself. (34-8)	Miss B recalls dreaming about hanging or being hanged.
Miss B hangs herself, but does not die, and suffers no ill effects. (34-43)	Miss B wills herself to die but does not die, and finally stops doing so. There are no subsequent ill effects. <i>Dreaming</i> about hanging does not, of course, harm her.
A girl friend of Miss B's appears in the dream quite unexpectedly. She seems about the same age as Miss B, but Mr A does not know who she is or how she got there. (34-7)	Miss C, a stranger to Mr A, unknown to Mr A, was staying with Miss B that night. She is the same age as Miss B.
The girl friend also hangs herself, but, like Miss B, she is revived with no ill effects. (34-43)	Miss C had, a few days earlier, tried willing herself to die, and had 'blacked out' for a few moments, but suffered no ill effects. Miss C had suggested this bizarre 'experiment' to Miss B.
The office building is under construction. (46-8)	Miss C dreamed of being in a building that was under construction.

The similarities between Mr A's dream and these other events are summarized in Table 2, with line references to Mr A's dream. These similarities will be referred to as the A-B and A-C parallelisms.

The A-C parallelism is too tenuous to warrant further discussion.

Miss B is a person who is inclined to be rather dramatic about the things she does, as is her friend Miss C. She could not, however, be described as morbid or suicidally inclined, and her motivation for trying this unusual 'experiment' seemed to be that it was a novel and adventurous thing to do. Nevertheless, this particular 'experiment' was a quite unusual thing for *anyone* to do, and the A-B parallelism cannot plausibly be attributed to chance coincidence.

An interesting feature of the present case is that we need not depend on only this 'common sense' assessment of the improbability of Mr A's dreaming of Miss B's unusual actions and dream. As mentioned above, Mr and Mrs A kept a record of their dreams for some time before and after the 24th. They kindly allowed me to read through their entire collection of dreams in order to count the frequency of appearance of the various important elements of the dreams reported above. There were 95 dreams¹ of Mr A and 165 dreams¹ of Mrs A, not counting the dreams presented here. Table 3 presents the frequency of occurrence of these critical elements in these dream collections.

In view of the infrequent occurrences of the critical elements revealed by inspection of Table 3, the probability of their joint occurrence by chance alone would be quite low, and thus chance coincidence can be almost certainly rejected as accounting for either the A-A' or the A-B parallelism.

Possible explanations of the A-A' parallelism have been discussed above. While some form of E S P might be invoked to account for this parallelism, it *need* not be. The alternative hypotheses of sleep-talking by Mr A and/or common experiences and trains of association leading to the parallelism must be given priority.

Two alternative hypotheses exist for explaining the A-B parallelism. One is that some form of E S P was operative, and the other is that some intricate series of unconscious associations, common to Mr A and Miss B, was triggered by Mr A's impending visit to X. The latter hypothesis will be discussed first.

¹ A dream, for the purposes of this scoring, meant any portion of a narrative for a given date described within the narrative as a distinct dream episode. Thus on some mornings Mr or Mrs A reported more than one dream.

TABLE 3
FREQUENCY OF CRITICAL ELEMENTS IN LARGE DREAM COLLECTION

Element	Number of Appearances	
	Mr A's Dreams	Mrs A's Dreams
Office building	1 (1%)	5 (3%)
Any building of 8, 4, or 84 stories	0	0
Re-entering any building by a different entrance than it was left by	0	0
Service entrance	0	0
Any normal elevator	3 (3%)	2 (1%)
Bizarre elevator	0	1 (1%)
Using stairs because of unsatisfactory elevator performance	0	1 (1%)
Hurrying on stairs in company of at least one other person	0	5 (3%)
Miss B	5 (5%)	15 (9%)
Miss B hanging herself, or otherwise suiciding	0	0
Any girl friend of Miss B's	0	0
Any building under construction	1 (1%)	2 (1%)

In any allegedly parapsychological case, a hypothesis of similar unconscious trains of association accounting for the parallels can best be supported by means of intensive, therapeutic interviews of the participants, utilizing free association and similar techniques. Such a procedure was unfeasible in the present case, as indeed it would be in almost all cases of this nature occurring outside of an already existing therapeutic setting. The hypothesis must then be judged on the less satisfactory grounds of internal consistency and plausibility.

In the present case, the hypothesis of similar unconscious trains of association by Mr A and Miss B might run along the lines that Mr A and Miss B have an unconscious sexual attraction toward each other, this attraction being represented in disguised form (playing a game, running up stairs, etc.) in Mr A's dream, and accounting for Mr A dreaming about Miss B on the eve of seeing her. This attraction also produces feelings of guilt in both parties, since our culture considers such an attraction illicit, and Miss B's guilt feelings are expressed by her action (willing herself to die) and dream (hanging or being hanged). Mr A's guilt is transformed into aggression in his dream in which he tries to get rid of Miss B (and thus his attraction and consequent guilt) by having her hang herself.

As well as being unable to explain the correspondence in the particular form of the manifest dream content (hanging), this unconscious associations hypothesis has great difficulty in accounting for one fact. Miss B's behaviour (willing herself to die) seems to have been instigated primarily by Miss C, and Miss B's dream would also seem to be primarily a function of the behaviour Miss C instigated. To stretch the unconscious association hypothesis to include Miss B subtly influencing Miss C to try willing herself to die, several days in advance, with Miss C thinking it was her own idea, and then further influencing Miss C to think she had inspired the idea in Miss B several days later, seems rather far-fetched. Furthermore, a girl who might have been Miss C (Mr A could not recall his dream imagery well enough to definitely identify Miss C as the other girl when he met her at a later date, although she did fit his imperfect memory image) appears suddenly in Mr A's dream, much to his surprise (lines 34-7), and *if* this was Miss C, her appearance is completely inexplicable on an unconscious association hypothesis. It could be argued that the other girl in Mr A's dream is not Miss C, nor a girl friend of Miss B's, as she was described in the dream (line 36), but merely a doubling of Miss B. All that supports this latter argument are occasional observations in the psychoanalytic literature that one person is represented as two people in dreams. To argue that something is not what it is described as, but something else, with no other supporting evidence, is not a very strong argument, however.

Ruling out chance coincidence, then, the major alternative to a hypothesis of some form of E S P accounting for the A-B parallelism is the hypothesis of similar trains of unconscious associations by Mr A and Miss B, probably based on unconscious sexual attraction and guilt and triggered by Mr A's impending visit to Miss B's home. The hypothesis does not explain the close parallelism between the *manifest* content of Mr A's dream and Miss B's actions and dreams, which is the *observed* data, and must be stretched rather far to account for Miss C, a complete stranger to Mr A, being the instigator of Miss B's actions. While the unconscious associations hypothesis cannot be completely ruled out, and the history of psychical research is filled with examples of investigators pushing 'normal' explanations to extreme lengths rather than invoke E S P, many will feel that some form of E S P having been operative (and perhaps influenced by unconscious factors) seems more likely.

No single case can ever be attributed to the operation of E S P, of course, and the present case is no exception. *Assuming* that some form of E S P was operative in bringing about the A-B parallelism, however, there are a number of interesting features

of the present case which could aid in understanding 'psychic' dreams in general, and these features will be discussed in order to illustrate some hypotheses. The hypotheses are fairly general and do not depend on our being certain that E S P was operative in the present case.

There seems to have been no intentional agent in the present case. Miss B may have thought that Mr A would be interested in her 'experiment', but she reported that she certainly made no conscious attempt to communicate this to him on the evening of the 24th. That Miss C was present with Miss B was, of course, known to the latter, so there is no need to suspect Miss C of acting as an agent. Nor does it seem likely that Mrs A acted as an agent in bringing about the A-B parallelism. This leaves Mr A, the percipient, as the person who would have 'used E S P' to gather information about Miss B's activities and dream, an action similar to what Tyrrell (1961) termed 'telaesthesia'. Tyrrell restricted the term to telepathy, however, and in the present case there is nothing to indicate whether Mr A utilized the E S P abilities conventionally distinguished as telepathy or clairvoyance or both.

In support of the hypothesis that Mr A was the person who used E S P are two facts. First Mr A was preoccupied with (one might almost say, 'focused upon') thoughts of X and Miss B as he restlessly fell asleep.¹ Second, Mr A is quite interested in psychical phenomena (as many electrical engineers seem to be), and would have been pleased to experience a 'psychic' dream (as he reported he was when he became aware of the A-A' and A-B parallelisms).

It is of some interest that the information we are now assuming to have been acquired by E S P was not *directly* presented, for the most part, to Mr A in his dream. Rather it was modified and transformed in various ways, and accompanied by a considerable amount of 'irrelevant', non-veridical information, with the net result that Mr A experienced a reasonably coherent and continuous dream. This seems to be at least partially explicable in terms of the results of experiments on nocturnal dreaming carried out in the last decade. Let us now briefly review these results.²

What we ordinarily think of as dreaming appears to occur only during a particular kind of sleep named stage 1 sleep after its

¹ The hypothetical, unconscious sexual attraction could be relevant to this 'focusing'.

² For comprehensive reviews and evaluations of this research, the reader is referred to Diamond, 1962; Kamiya, 1961; Kleitman, 1960, 1963; Oswald, 1962; and Snyder, 1963.

characteristic electroencephalographic (E E G) pattern. Stage 1 dreaming occurs in discrete periods, each period beginning at approximately 90 minute intervals through the night's sleep, and each of these periods of stage 1 dreaming being generally longer than the preceding period. The first period, e.g., may be about 10 minutes in length, and the last 40 or 50 minutes. The total amount of time spent in stage 1 dreaming by most adults (about 20-30% of total sleep time) is fairly stable from night to night, as is the sequential timing of the stage 1 dream periods, regardless of normal variations in day-to-day activities. This sleep-dream cycle seems to be quite resistant to experimental modification, short of such drastic techniques as sleep and dream deprivation (Berger & Oswald, 1962; Dement, 1960; Dement & Fisher, in preparation; Williams *et al.*, 1962) or the use of certain drugs (Gresham *et al.*, 1963; Rechtschaffen & Maron, in press; Snyder, 1963; Whitman *et al.*, 1961). That is, the control and timing of the process of dreaming seems to be controlled primarily by relatively autonomous, internal mechanisms (probably subcortical).

The results of presenting sensory stimuli (not intense enough to wake the sleeper) to dreamers are of particular interest. In general, there seems to be an active inhibition of incoming sensory stimuli, and many stimuli do not appear in the content of the reported stage 1 dreams in recognizable form at all. Dement and Wolpert (1958), e.g., found that only about 25%, on the average, of experimental stimuli were incorporated into stage 1 dreams, with some stimuli being more effective than others. In addition, these investigators found that external stimuli were never the *cause* of dreaming, i.e., a stimulus presented to a sleeper who was not dreaming (in E E G stage 2, 3, or 4) never resulted in the sleeper's beginning to dream.

When external stimuli do appear in the dream, they generally do not 'control' the dream in the sense of strongly determining the content of the dream. Rather, they are woven into the fabric of the ongoing dream, they are literally 'incorporated' by the dream. For example, if a bell were sounded beside a dreamer and he was awakened for a dream report a minute later, the report would rarely be of the form, 'I dreamed about a bell ringing' (although a report from a sleeper who was not dreaming in stage 1 might very well take this form). The bell would usually be woven into the ongoing dream, producing a report of the form, 'I was driving my car down Main Street, talking to my friend John about politics. As we were talking I heard some bells ringing, and then a siren, and a moment later a fire engine raced past us. John and I watched it go around a corner, and then continued talking about

politics. . . . ' The information conveyed by the stimulus is fitted in with the content of the dream, and this may involve various transformations or modifications, such as representation by a different sensory modality, or perhaps the various types of dream work mechanisms postulated by Freud (1954), such as symbolization, condensation, etc. The degree of modification of the stimulus may be related to its degree of congruence or incongruence with whatever the dream content happens to be at the time it occurs.

Now many 'psychic' dreams appearing in the literature, particularly the crisis cases, seem to be characterized by the fact that an exact or symbolic representation of the paranormal information seems to constitute the entire dream, as if the entire dream were a response to whatever 'psychic stimulus' suddenly sprang from a background of mental quiescence. Many of the examples presented in L. E. Rhine's (1962) recent review article, e.g., are of this nature. Other 'psychic' dreams, of which Mr A's seems to be an excellent example, appear to be instances of paranormally acquired information being incorporated into the content of an *ongoing* dream, in very much the same manner that sensory stimuli are incorporated into stage 1 dreams. In so far as there seems to be some automatic transformation and modification of incoming stimuli to fit it into the ongoing dream content, this would account for some of the distortions and transformations that are found.

For example, Mr A's dream presumably combined the actions and dream of Miss B (willing herself to die, with no ill effects, and hanging) into another form, hanging with no ill effects because she was cut down. But the dream was set in X, not at the vacation cabin where Miss B actually was at the time. Mr A's preoccupation with his impending trip to X seems sufficient to account for his dreaming about X and the Bs, while the information about Miss B's activities and dream which we are assuming to have been paranormally acquired is fitted into this normal, ongoing dream about X and the Bs in the same manner as an external sensory stimulus might have been fitted in.

In some cases the incorporation of external stimuli into the ongoing dream is not 'smooth', i.e. it contrasts sharply with the ongoing content even though it has 'forced' its way in. Similarly in the present case, one item of information, another person's presence with Miss B (possibly Miss C) was not smoothly incorporated, for Mr A seemed to feel surprised at her appearance: ' . . . and I don't know how this other girl got into the dream . . . ' (34-5). Information about Miss B could apparently be incorporated without much disturbance of the ongoing dream, for Miss

B was a highly probable person to appear in a dream about Mr B and occurring in X, but Miss C, a stranger to Mr A, was a sudden novelty (if, indeed, the second person represents Miss C).

The following hypothetical picture of psychic dreams in general may now be proposed. The sleeper is experiencing a dream in stage 1 sleep. At some 'level' of the mind information is acquired by the operation of some form of E S P, and is presented to the dreamer in his dream in much the same way that sensory stimuli are. Some of the information is incorporated, some is not. Some of the incorporated information appears in the dream in an essentially unchanged form, some is transformed and modified to various degrees, the degree of modification possibly being at least partially dependent on the nature of the dream content at the time of presentation. Some of the incorporated information enters into the dream smoothly, some may enter in a rough, forced fashion that can result in a feeling of surprise, or markedly alter the course of the dream. Some elements of this information may clash so intensely with the ongoing dream content that the dreamer awakens. And, of course, there are probably various transformation and modification operations dependent on the personality dynamics of the dreamer over and above these operations inherent in the manner of incorporating information into ongoing dream content.

Depending on the quality and intensity of these various factors, a continuum of information incorporation in 'psychic' dreams may be postulated. At one end, a normal stage 1 dream may have a few items of paranormally acquired information smoothly and unobtrusively incorporated into its content. Such dreams are probably often forgotten shortly after waking without being checked for correspondence with external events. At the other end of the continuum are those dreams in which the paranormally acquired information dominates the dream, essentially inhibiting the normal process of dream content generation, with the paranormally acquired information comprising essentially all the dream content. Such dreams would probably make a strong impression on the dreamer, as he might be 'aware' on some level that the normal dream process had been massively disrupted. This sense of disruption, combined with the typically traumatic nature of the events paranormally 'perceived' would probably insure that the dreamer checked his dream after awakening.

At this latter end of the continuum another possibility should not be overlooked, viz., that these dreams are not stage 1 dreams but a special kind of dream occurring in some unique, albeit unknown, psychophysiological state. Or they might be 'hallucinations'

occurring during stage 2, 3, and 4 of non-dreaming sleep. Until such dreams occur under laboratory conditions, however, this possibility will be difficult to check.

In summary, then, there may be two qualitatively distinct kinds of 'psychic' dreams, and within the stage 1 'psychic' dreams there may be a continuum of various degrees of smoothness of incorporation and modification of paranormally acquired information.

Another intriguing aspect of Mr A's dream is that it seems to be divided into two fairly distinct portions.¹ In the first portion the A-A' parallelism occurs, and when Mr A leaves the elevator the A-B parallelism begins. Two lines of speculation about this shift are possible. As one possibility, the events may be assumed to have happened in the order presented in the dream, i.e., Mr A: (1) either acquired information about Mrs A's dream by E S P, and/or influenced her dream by sleep talking to her, and/or arrived at a similar dream via parallel associative paths; and (2) then acquired the information about Miss B's activities and dream by some form of E S P. One could conceive of Mr A 'warming up' his E S P abilities on his wife and then being able to 'reach out' all the way to Miss B.

An alternative possibility is that Mr A paranormally acquired the information about Miss B's activities and dream before the first part of his dream began. The A-A' parallelism was then brought about by either sleep talking and/or E S P, and then the information about Miss B was incorporated into the ongoing dream. This possibility has the advantage of providing a 'function' for the A-A' parallelism, viz., that of calling attention to the rest of the dream containing the A-B parallelism. Mr A reported that he would never have thought of asking Miss B about her activities and dreams if he had not been impressed with the A-A' parallelism. Assuming that Mr A's motivation was to please himself by having a 'psychic' dream, the A-A' parallelism thus functioned as a marker or attention getting signal, capitalizing on the fact the Mr and Mrs A would probably mention their dreams to each other during breakfast.

This latter possibility receives support from the fact that Mr A had experienced an allegedly 'psychic' dream some six months prior to the present events,² and while he had awakened from it with the feeling that there was something special about it (as seems to happen in many crisis cases), he had finally given up

¹ Actually four portions, counting the omitted beginning and end of the dream, which did not seem relevant to the question of parallelism.

² It is planned to prepare this allegedly 'psychic' dream for publication at some future date, as it has a number of interesting features.

trying to make sense out of it, and had only accidentally discovered later that day that it seemed to bear striking resemblances to the actions of some friends of his. Thus a feeling of a dream's being 'special' had failed once to alert Mr A to the need to check his dream, so perhaps in the present case a marker was used as an alternative to a feeling of specialness. A survey of cases of 'psychic' dreams in the literature with reference to what caused the dreamer to check his dream against reality might be of some value.

It is hoped that the hypothesis presented herein and illustrated by the present case may be of some value in understanding some aspects of 'psychic' dreams; the alternative hypotheses of non-E S P need in every case to be carefully checked, however, for completely unambiguous evidence is difficult to find.

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REVIEWS

THE INFINITE HIVE. By Rosalind Heywood. Chatto and Windus, 1964. 25s.

Last year Professor Medawar broadcast upon the nature of scientific papers and the absurdity of their presenting facts and ideas according to a conventional syllogism and not as a record of the actual process by which they were reached. Such a record would not only be a courteous bridge between writer and reader, but would have the particular human value of showing that ideas are individual prepossessions and not the products of abstract machinery.

Mrs Heywood, having previously come to a like conclusion, has followed her first lucid and invigorating book on the history of research into E S P with a remarkable autobiographical essay. This does all that Professor Medawar could have hoped, in showing how facts, theories and experience take life from one another. It is an autobiography of hunches, a small classic of delicate handling: just how delicate the subject is she reveals fully in her opening chapter, where she confesses to all the doubts that a rational mind must have in dealing with an activity which leaves so little trace behind it. If one could prove E S P to be caused by a virus, people might glory in suffering from telepathy as some do in having the 'flu'; but E S P being not a thing but an event in the mind, there are always critics in ambush ready to cry Fraud, Delusion or Mere Coincidence at anyone who admits to its working in themselves. What is one to do when faced by such a disheartening chorus?

The problem of E S P, hunches and spontaneous cases is indeed a knife-edge waiting to divide the sheep from the goats. Yet, as Mrs Heywood reminds us with a Baconian quotation, there is a superstition in avoiding superstition. May it not be that every