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## STATISTICS OF DREAMS.

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The phenomenon of dreaming has rarely been discussed or investigated in a thorough and in an experimental manner; of description, of theory, of discussion, of poetical analogy and illustration there has been no end; of accurate observation almost nothing.<sup>2</sup> The most scientific books—those of Maury and of Tissié—have been wholly or chiefly the result of the observation of abnormal subjects, and in the interest, more or less distinctly, of pathology. The fullest discussion of the subject—the works of *Radestock* and of *Spitta*—are largely compilations of the recorded dreams of other people.

The basis of the following paper is the accurate record of the dreams of two people, from notes made by themselves during the night, and supplemented by careful study and recollection on the following day. The investigation was undertaken at the suggestion of Dr. Sanford and was carried on for six or eight weeks. Its method was very simple: to record each night, immediately after waking from a dream, every remembered feature of it. For this purpose, paper, pencil, candle and matches were placed close at hand. Early on the next day, with rare exceptions, these abbreviated notes were re-read, copied in full and enlarged by comments, by description of all attendant circumstances, and by the indication in all possible cases of the connection of the dream with the waking life. During the first weeks of the experiments, an alarm clock was used to wake the experimenter at different hours of the night. Later, the use of the clock was discontinued because the excitement of waking through its agency was often so great as to prevent connected memory of the dream.

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<sup>1</sup> Received as a private pupil, 1890-91.

<sup>2</sup> Of this character, I know only the papers of Prof. Nelson (*Am. Journ. Psych.*, I., p. 385); Heerwagen (*Wundt's Philosophische Studien*, V. p. 88); Ives Delage, *Revue Scientifique*, July, 1891.

Omitting, so far as possible, all general discussion of the nature and the explanation—physiological and psychological—of dreaming, I shall chiefly discuss the classified results of the observations to which allusion has been made. It will be well, therefore, to give at once the general results of the statistics and to indicate some of the difficulties. Chief among these is that of recalling dreams after one has waked. Doubtless this is due, both to the lack of congruity between the waking and the dreaming life, and to the slight excitement which often accompanies the act of waking. To recall a dream requires usually extreme and immediate attention to the content of the dream. Sometimes the slight movement of reaching for paper and pencil or of lighting one's candle seems to dissipate the dream-memory, and one is left with the tantalizing consciousness of having lived through an interesting dream-experience of which one has not the faintest memory. To delay until morning the record of a dream, so vivid that one feels sure of remembering it, is usually a fatal error. During the progress of the observations, the account of one dream, apparently of peculiar significance, was written out in the dark by the experimenter, who then sank off to sleep with the peaceful consciousness of a scientific duty well done. In the morning the discovery was made that an unsharpened pencil had been used, and the experimenter was left with a blank sheet of paper and no remotest memory of the dream, so carefully recalled after dreaming it.

The difficulty in remembering dreams suggests, of course, the impossibility of an exhaustive enumeration of their peculiarities and of any positive conclusions from the figures of such tabular views as will be offered. At the best, one may discuss only dreams as remembered, and the power of recollection varies widely with age, temperament, health and other conditions. A dream which is remembered in detail must have been a vivid one, but it is not true, as we often assume, that a vivid dream is necessarily well remembered, for both dream-records here considered contain several cases of "vivid dreams immediately forgotten." In one case a distinct memory of a vivid visual dream of a newspaper included no faintest recollection of one word on the page. It seems certain, therefore, that most people dream much oftener than they think.

While some dreams thus escape the memory, the very effort to record may well tend in the contrary direction, toward an increase of their number. The observer with the recording "on his mind" may sleep less soundly, dream more and wake oftener. Too great an anxiety certainly has this effect. Finally, the student of dreams is

in danger of reading into his dream much that is characteristic of the waking consciousness, something as one interprets an animal's actions by one's own. As the dog is said to "reason" when he performs—instinctively, for aught we know—an act which would imply reasoning on our part, so emotions, thought and deliberation, which were really absent from a train of dream-images, may be supplied by the reflective after-consciousness.

With these preliminary cautions one may turn to the study of the figures. The observers will be designated as S. and C. S., a man of thirty-two, took notes for 46 nights and recorded 170 dreams; C., the writer, a woman of twenty-eight, took notes on 55 nights and recorded 205 dreams, an average of nearly four dreams a night in each case. Neither observer had previously regarded himself as a frequent dreamer. After the records were completed, each worked up the figures for his own dreams, with occasional conferences with the other. Such individual treatment was unavoidable where the relations of the content of the dreams to previous experience were to be considered; some differences were thus introduced into parallel tables, but none of them are regarded as of great importance.

## TIME OF DREAMS.

TABLE I.

Observer S.      Number of Dreams Included in the Table, 118.<sup>1</sup>

10.30 P.M.—11.30 P.M.	11.31 P.M.—5.30 A.M.	5.31 A.M.—8.30 A.M.
4 3.4%	52 44%	62 52.6%

TABLE II.

Observer C.      Number of Dreams Included, 183.<sup>2</sup>

BEFORE 4 A.M.			AFTER 4 A.M.	
On Fal'g Asleep Eve'g.	11 P.M.—2.30 A.M.	2.31 A.M.—4 A.M.	4 A.M.—6 A.M.	6.01 A.M.—8 A.M.
1	22	26	78	56
49 (26.8%)			134 (73.2%)	

<sup>1</sup> The records on the remaining 52 dreams did not specify the time with sufficient exactness for use in this table.

<sup>2</sup> The total number of dreams recorded was 205. The last 7 dreams recorded together with 15 others have been omitted from this count, because no sufficient record was made of the time at which they occurred.

The general result of these tables is, of course, to confirm the opinion that most of our dreams occur during light, morning sleep. They show, however, conclusively that the sleep of the middle of the night is in no sense a dreamless sleep, for, of course, the recorded number of "before 4 A. M." and "before 5.30 A. M." dreams is only a record of remembered dreams, and after the use of the alarm clock had been discontinued, fewer dreams from the middle of the night were recorded because of the infrequency in waking.

The inquiry whose results are next tabulated was undertaken in order to discover the effect, if any, of the time of a dream, on its connection with the previous waking-life.

TIME VERSUS SUGGESTED CHARACTER OF DREAMS.

TABLE III.

Observer C.

194 Dreams Included.<sup>1</sup>

	BEFORE 4 A.M.			AFTER 4 A.M.		TIME UNDET'D.	TOTALS.
	Falling Asleep	11-2.30	2.31-4	4.01-6	6.01-8		
No Suggestion Traced.		1	4	11	5	1	22 (11.3%)
Slight or Vague Suggestion or Mere Congruity.		8	11	33	22	6	80 (41.3%)
Suggestion.	1	7	8	26	17	5	64 (33.%)
Close Suggestion.		6	2	7	10	3	28 (14.4%)
Totals.	1	22	25	77	54	15	194
		= 48		= 131			

<sup>1</sup> The total (194) differs from that of Table II., because 4 dreams, occasioned by peripheral sensation, have been rejected from the count, and 15 of undetermined time included.

The most obvious conclusion from this table is the close connection between the dream-life and the waking-life. In only 11 per cent. of the dreams is it impossible to discover such connection. When, however, we seek the answer to our immediate question, it seems impossible to calculate accurately the influence of the time of a dream upon the degree to which it is associated with the waking experience. It is impossible to conclude that the dreams which follow most immediately upon our daytime experience will be more closely united with it than the morning dreams; and equally wrong to conclude that dreams during the lighter sleep of morning, nearer the waking-state, will be more congruous with the waking-life.

TABLE IV.

Observer S.

170 Dreams Included.

TIME.	10.30—11.30	11.31—5.30	5.31—8.30	UNDETERMINED.	TOTAL.
No Suggestion Traced.	1	29	34	25	89 (52%)
Vague Suggestion or Mere Congruity.	1	13	21	16	51 (30%)
Suggestion Traced.	2	10	7	11	30 (18%)
Total.	4	52	62	52	170

The figures in Table IV. are of the same general import as those of Table III., though the proportion of dreams suggested by waking-life is much smaller. This is undoubtedly due in part to a different criterion in classifying. The dreams of S. were very frequently pervaded with an atmosphere of experiment, not definite enough to warrant placing them in the class of vague suggestion, but undoubtedly dictated by the waking occupation, though possibly also by the very attempt to record the dreams. Furthermore, dreams in which the companions of waking-life were present were not included as suggested dreams unless some incident of the dream was also suggested.

The next tables embody an attempt to classify the dreams according to their vividness. The difficulty of this classification has been already suggested. Vividness and the fact of

being distinctly recalled are not equivalent characteristics. Because a dream is indistinctly remembered, it is not fair to conclude that it is not a vivid one, yet it is not safe to trust altogether to a mere memory of vividness without any support for the impression. The degree to which a dream is recalled (which may be roughly gauged by the length of the written record) is thus a convenient, though not an absolute, test of the vividness of a dream.<sup>1</sup> Both factors enter into the following classification: Class I. includes dreams which were very vivid and were remembered in detail; class II. comprises vivid dreams, usually less vivid than those of the first class, and less accurately remembered; class III. includes, in general, dreams of still less vividness which are recalled in less detail, but contains a few cases of dreams which are largely forgotten, though remembered as vivid;<sup>2</sup> finally, class IV. contains the record of dreams largely forgotten, which—so far as recalled—were indistinct.

## VIVIDNESS OF DREAMS.

TABLE V.<sup>3</sup>

Observer S.

Number of Dreams Included, 170.

	CLASS I.	CLASS II.	CLASS III.	CLASS IV.	TOTAL.
No. Cases.	40 (23.5%)	41 (24.1%)	44 (25.9%)	45 (26.5%)	170
Total No. of Lines.*	1062	331	128	96	1617
Average No. of Lines.	26.5	8.1	2.9	2.1	9.5+

\* Average number of words in a line of record, 12.2.

<sup>1</sup> The plan of estimate by the length of the record is borrowed from Prof. Nelson. *Am. J. Psych.* I. p. 383.

<sup>2</sup> For instance, the newspaper dream mentioned above.

<sup>3</sup> So nearly as I can judge, vividness, as opposed to length of record, was a little more closely the standard of classification in Table VI. Notice the greater length of dreams in Table V., except under class III.

TABLE VI.

Observer C.

Number of Dreams Included, 191.<sup>1</sup>

	CLASS I.	CLASS II.	CLASS III.	CLASS IV.	TOTAL.
No. Cases.	32 (16.8%)	65 (34%)	57 (29.8%)	37 (19.4%)	191
Total No. Lines of Record.*	705	443	174	66	1388
Average No. of Lines.	22	6.8 (circa)	3	1.75 (circa)	7.25 (circa)

\* Average number of words in a line, 8.6 (circa).

In general, the dreams of C. were written out in rather less detail than those of S., so that the comparative length of the records does not give an accurate idea of the comparative length of the dreams of the two observers. A notion of the principle of classification may be gained by referring to dreams 43, 193 (C.); 28, 111 (S.),<sup>2</sup> which have been included in class I.; to dreams 91 and 94 (C.),<sup>3</sup> which belong to class II., and to dreams 19 and 68 (C.),<sup>4</sup> of class III.

These results are perhaps fairly indicative of the average vividness of dreams. The following table, and the inference which may be drawn from it, suggests that vivid dreams are by no means confined to morning hours, as might perhaps be supposed :

<sup>1</sup> Fourteen dreams, in which the record is inadequate, are omitted.

<sup>2</sup> Pages 336, 328, 325, 324. Observe that only dream 43 is quoted in full.

<sup>3</sup> Pages 326 and 325. See also dreams of S. in foot note, p. 132.

<sup>4</sup> Pages 343 and 336.



## DREAMS BEFORE AND AFTER 4 A. M.

TABLE VII.

Observer C.

Number of Dreams Included, 184.<sup>1</sup>

	CLASS I.	CLASS II.	CLASS III.	CLASS IV.	TOTAL.
Before 4 A. M.	2 (4.26%)	10 (21.28%)	20 (42.55%)	15 (31.91%)	47
After 4 A. M.	27 (19.71%)	54 (39.41%)	33 (24.09%)	23 (16.79%)	137
	29 (15.76%)	64 (34.78%)	53 (28.81%)	38 (20.65%)	184

## DREAMS BEFORE AND AFTER 4 A. M.

TABLE VIII.

Observer S.

Number of Dreams Included, 109.<sup>2</sup>

	CLASS I.	CLASS II.	CLASS III.	CLASS IV.	TOTAL.
Before 4 A. M.	5 (15.6%)	9 (28.1%)	8 (25%)	10 (31.3%)	32
After 4 A. M.	24 (31%)	25 (32.5%)	15 (19.5%)	23 (16.9%)	77
	29 (26.6%)	34 (31.2%)	23 (21.1%)	38 (21.1%)	109

It will be observed that as large a proportion of dreams of a moderate degree of vividness (Classes II. and III.) occur during the night as toward morning. The percentage of most vivid dreams is greater after 4 A. M.; that of the least vivid dreams, on the contrary, is greater among the night dreams

<sup>1</sup> The dreams omitted from the count in Table VII. are the first fourteen, of which the record is not an adequate one; and the last seven, in which the time recorded was not kept.

<sup>2</sup> The dreams omitted are 43, whose time is not recorded; and 17, whose time (as between 11.30 and 5.30) cannot be classified on this plan.

than among those of the morning. We conclude, therefore, that the dreams after four o'clock tend to be more vivid than the earlier ones, but that the distinction is no absolute one.

Dreams may be most conveniently classified according as they are connected through sense excitation with the immediate present, or through the fact of association with the waking life of the past, according, that is, as they contain presentations, or merely representations. Or, in physiological terms, dreams are occasioned or accompanied by peripheral or by merely cerebral excitation. When I dreamed of hearing fire-bells, and then seeing from my window the burning of a church, and waked to find my window-shade flapping back and forth in a strong wind, this was evidently a presentation dream; on the other hand, when I dreamed of meeting Caroline Schlegel, after actually reading a story of her life, it was a representation dream. But as Spitta (who makes a similar division into *Nervenreizträume* and *Psychische Träume*) suggests<sup>1</sup> no dream belongs exclusively to one class or to the other, so that it is more accurate to refer to the presentation elements and to the representation elements in a dream.

The following are the classified results of the dream-records under this head:

## PRESENTATION ELEMENTS IN DREAMS.

TABLE IX.

Number of Dreams Included: For S., 170; for C., 165.<sup>2</sup>

	VIS'L.		AUD.		TACT.		TEMP.		GUST.		ORGAN.		TOTAL.	
	Clear	?	Clear	?	Clear	?	Clear	?	Clear	?	Clear	?	Clear	?
S.	1	1	3	9	1	2		4				1	5	17
C.	1	1	2		1	1	1	1	2		1		8	3

Totals, S., 22=13.2%.  
C., 11= 6.7%.

The most striking outcome of the figures is the relatively small number of dreams which can be shown to include any sense-perception. A closer inspection shows that, with both observers, the auditory dreams are of chief importance, a fact

<sup>1</sup>Spitta, p. 213.

<sup>2</sup>Dreams of Class IV. were not considered in C.'s Statistics.

of common experience and readily explained since, next to sight, hearing is the sense most constantly exercised, and of the two is the more easily stimulated when the eyes are closed in sleep. Visual presentation dreams are less frequent, but dreams from dermal excitation occur comparatively often, and the occasioning sensation is apt to be much exaggerated. For instance, a dream of struggling to crawl from an elevator, through an absurdly small opening, into an eighth-floor apartment, was traced directly to a cramped position and to a heavy covering across the face; a dream of a sleigh-ride on an intensely cold day, and of hearing that the cornea of a friend's eyes had broken from the cold, was evidently occasioned by a stiff breeze blowing in at the window. Nightmares are often attributed to this cause, as the German name *Alpen-druck* shows.

Dreams through stimulus of the lesser senses, smell and taste, are infrequent, but not unknown. Our observed dreams include none through stimulus of the sense of smell, but there are two clear instances of the taste-dream, though in most so-called taste or smell-dreams one dreams of seeing food or flowers, not of actually tasting or smelling.

Of dreams whose starting point is organic sensation<sup>1</sup>, there are only two cases among those classified in Table IX. Common instances of such dreams are fright dreams in their simple form, or in the exaggerated nightmare stage,<sup>2</sup> which are largely due to organic sensations of pressure for breath, of quick heart-beating, or of digestive discomfort. Our records contain no instances of dreams initiated by actual movement.

So nearly as I can judge, the intrusion of the sense-impression into the dream-train is during the transition between sleep and waking, and the dreams or parts of dreams preceding the waking dreams are those undisturbed by sense. In any case, the emphasis, by most writers,<sup>3</sup> of dreams of this nature seems to be due to the fact that the dreams from which conclusions have been drawn are, in almost all cases, particularly striking and unusual dreams, and therefore not fairly representative of the warp and woof of dream experience. The most important feature of the present investigation is really the very prosaic and ordinary nature of most of the dreams recorded and the exhaustiveness with which, during a number of weeks, all remembered dreams, and not merely peculiar and abnormal ones, were registered.

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<sup>1</sup>For a fanciful account cf. Scherner.

<sup>2</sup>Cf. Radestock, *op. cit.*; and Kant, *Anthropology*, § 34, p. 105.

<sup>3</sup>*E. g.*, Sully, *Illusions*.

The representation elements of a dream may enter through association of the first stage of the dream with the waking life, in which case we have what is properly a cerebral or representation dream, or may enter through association within the dream of one element with another. In this latter sense, all dreams contain representation elements, for the very transformation of the sense-excitation of the presentation dream into an image requires the associative process.

REPRESENTATION DREAMS.  
TABLE X.

Representation Dreams.	Presentation Dreams.	Undetermined.	Totals.
S. 148 <sup>1</sup>	22		170
C. 191	11	3	205

The following table presents a classification of what we have called representation elements of dreams:—

REPRESENTATION ELEMENTS<sup>2</sup> IN DREAMS.  
TABLE XI.

REPRESENTATION OF COGNITION.							REPRESENTATION OF ACTION.	
	Vis'l.	Audit.	Derm.	Gust.	Olf.	Gen'l.	Vocal.	Other.
S.	113	76	7	0	2	1	36	44
C.	127	81	14	0	2		71	71

Total number of dreams considered: S., 133; C., 165.<sup>3</sup>

The preponderance of visual images is very striking. The relation to auditory images (the figures indicate in both instances a ratio of about three to two) seems to me the more

<sup>1</sup> All which cannot be counted as presentation dreams have been counted as representation dreams.

<sup>2</sup> The table is not a classification of dreams, but of representation elements. Representations of more than one sense and of action often occur in the same dream. Hence there can be no attempt to make totals correspond.

<sup>3</sup> All dreams of class IV. have been omitted from the total 205 dreams because too imperfectly remembered, with a few others not classed as IV., but incompletely described (in all, 40).

remarkable in the case of C., who has no very vivid, visual imagination, but on the other hand thinks habitually with words rather than with concrete images.

Next to visual-dreams, word-dreams have been by far the most frequent, in the case of C., and have occurred often with S. There are many cases, in the former records, in which the words have seemed to suggest the dream or to form its significant part. The words have been spoken, heard, read and sometimes written; very often they have been spoken and heard, or read and written, or spoken and read, in the same dream. The following table summarizes these results:

WORD ELEMENTS<sup>1</sup> OF DREAMS.

TABLE XII.

	Spoken.	Heard.	Visibly Read.	Written.	
				Clear	?
S.	36	63	10	4	2
C.	73	78	11	2	

Total number of dreams in which words occur: S., 77 (of 147);<sup>2</sup> C., 110 (of 165).<sup>2</sup>

English was the language of all these dreams, but in the following cases foreign languages were represented in the dreams of C., usually only by a word or a phrase, but sometimes more at length: German, 5 cases; French, 5 cases; Italian, 1; Latin, 1.

C. had many dreams in which the connection with waking life and the occasion of the whole dream or of some part of it was a merely verbal association. Some of these dreams consisted wholly of the philosophical expressions, more or less logically combined, of the authors whom C. was then very intently studying. In one case the application of such a philosophical phrase was very oddly turned. C. had been reading Fichte's *Wissenschaftslehre*, and the day before had wrestled with his description of the non ego as "*bestimmbar aber nicht bestimmt.*" In the dream, C. was discussing with a friend a matter of personal expenditure and told him, quite properly, that it was "*bestimmbar aber nicht*

<sup>1</sup> Many dreams contain both spoken and heard words, etc.

<sup>2</sup> Dreams of class IV. not included. 14 dreams included, which were omitted from Tables VI. and VII. because time-record is not given.

*bestimmt.*" Another time, after reading in the evening that Elizabeth Phelps Ward had bought a farm at Oak Hill, a dream followed of lunching at the Oak Farm restaurant.

Sometimes a word was visualized in a dream. C., for instance, after reading just before falling asleep a list of words of which one was "snake," dreamed of walking through tall grass and of seeing a snake in the path, and after reading Everett's *Fichte*, dreamed of meeting Dean Everett. Occasionally the dream began as a verbal one and grew from word to act, as when from the reader of a romance, the dreamer became one of its actors. The following table covers most of these cases.

TABLE XIII.

Observer, C.

28 cases included.

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Words suggest dreams in 28 cases.

Words are transferred in 17 cases.

With same application, 14 cases.

Philosophical application: clear, 8; doubtful, 4.

Other application, 2.

With changed application, 3.

Philosophical application, 1.

Other, 2.

Words are visualized in 3 cases.

Words enter otherwise, 8 cases.

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Words are exactly remembered in nineteen cases by S., in five only, by C. Three of these are cases of puns, which would never have been perpetrated in the waking life.

## II.

An important result of the study of dream phenomena is the demonstration of the essential congruity and continuity of the dream life with the waking life. The stages and aspects of psychic activity which make up our dreams are recognized as those of which our whole conscious life consists, and a careful examination of dream phenomena tends to establish what Spitta calls the "complete unity of the human mind."<sup>1</sup>

Of course perception occurs only in "presentation dreams," in which actual sensation has stimulated the dream activity, and the characteristic sort of dream-consciousness is the imaginative. A dream is in fact most simply defined as an illusion of the imagination in which images are reproduced, accurately and completely, or in fresh and varying combination. C. twice dreamed in exact detail some immediately preceding

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<sup>1</sup> "Völlige Einheit der menschlichen Seele."

event, a case of the simplest sort of mechanical imagination,<sup>1</sup> in which the association was that of total recall.<sup>2</sup> Far more often the representation of parts of one experience is combined with the representation of congruous parts of another, and most often the imagination reaches the emotional and erratic plane of fancy.

But besides this unrecognized imagination, which is the dream activity as such, there is overt imagination, just as there is memory, within a dream. In illustration of this, compare the following dream record—an extract from a longer one.<sup>3</sup>

April 7-8, 6.50 A. M. Observer S., Dream 111. "Before that, had been camping out with a lot of '83 people and others that I did not know, not far from where the gypsies used to camp on Lake M. . . . I think I said I would stay as long as anybody at the camp, and wondered how it would seem at last when everybody had gone, and if it would not then seem good to get back to a boarding-house. (I thought of the one to which I should go in O., and also thought how things would have to be raked up about the camp, in the dust)". The parenthesis contains the record of a distinct case of imagination within a dream.

Accurate memory of real events in the waking life is not frequent, but occurs in well-marked cases. For instance, C. twice recalled incidents appropriate to the dream situation, of travel in Italy four years before; in another case, two factory-girls applied for help in getting work, and C. remembered the circumstances of certain actual labor troubles in Lynn, which made it unwise to send them there.

The recorded dreams abound in instances of false memory, paramnesia. Dream persons and dream places are remembered, on waking, to have been widely different from the real people and places. Or, the dream consciousness accounts for the presence of some unexpected person, for some unfamiliar detail of the surroundings, by "remembering" something which never really happened.

<sup>1</sup> It is misleading to call this, as Maury does, "*souvenir ignoré*," or "*mémoire . . . non consciente*." Memory is distinguished from imagination in that it involves conscious reference to the past and to the self.

<sup>2</sup> Cf. James, *Psych.*, I., p. 588.

<sup>3</sup> All the dreams quoted from the records have been copied exactly, except for amendments of the English, not affecting the sense. Dashes ( - - ) indicate omissions, by the editor, of matter irrelevant to the case in hand; asterisks ( \* \* ) are copies of those *Gedankenstriche*, made in the original records.



Not only imagination, but real thought occurs in dreams, though the fact is often denied.<sup>1</sup> The frequency of conversation in dreams might be looked upon as a proof of the existence of the lower stages, conception and judgment, of thought-activity, for both are necessary to the use and combination of words. But such dreams may be instances of merely visual or auditory memory of words, and if there were no instances of explicit judgment and of reasoning in dreams, the presence of thought could hardly be proved. But not only do we form judgments in our dreams, sometimes correctly, though often inaccurately, but we carry on whole trains of reasoning, reasoning sometimes incorrectly, often correctly from absurd premises; and less often both correctly and from natural premises. (Cf. the dream quoted on page 328.) From many illustrations in the dream-records, I select the following:—

Incorrect Reasoning. Tuesday, March 31, 6.50 A. M. Dream 94. Observer C. "When we think substantiality and causality we think that which is out of time—but time we know exists, therefore substantiality and causality must be given up. This is Mr. Huxley's argument."<sup>2</sup>

<sup>1</sup>Cf. Spitta's dogmatic statement, p. 127 (see also p. 139); "Die traumende Seele ist unfähig richtig zu schliessen."

<sup>2</sup>An instance of correct and ingenious reasoning in the dream of S. I quote because the circumstances are so extraordinarily improbable, though its very elaborateness lays it under a certain suspicion of unconscious editing. March 15-16. Time, undetermined. Dream 28. (Observer S.) "In the sitting-room of the 13th street house. L. [a cousin] is there with her baby, and about to fit him with a new skull. The skull is a great deal too large for such a little baby (it was one which had belonged to some relative of the child, that had died sometime before; the skull was white and nicely cleaned like an anatomical specimen). I reflected that this was probably frequently done, and for this reason one sees so few skulls of children—they are transplanted to the heads of other children. I remembered that Dr. Z. had only one - -. I dis-jointed the skull at the sutures, and it came apart nicely. L. took the parts and went with the baby and some one else out of the room to perform the operation. I wondered at their coolness in prospect of it. Presently they returned with the baby. The child seemed a little upset, but not in a collapse, and only showed a partially healed wound over the top of the head from side to side where the scalp had been cut. They were not even going to keep the child indoors, but gave him to me to carry out. I set off with him toward the high school, and after a little found that he could talk, though making some errors, as if not entirely used to talking. As we continued he talked more and grew considerably (though I didn't notice it at the time, and only now remember that he was a good deal bigger on the return than on setting out). The theory seemed to be that by getting an older skull he came into, or rapidly adapted himself, to the size and attainments of the previous owner of the skull. I was struck with the fact that this put the active and organizing principle—the soul—in the skull instead of the brain—and naturally was filled with wonder."



The following table includes these cases of imagination, of memory and of thought in dreams. So constant an effort has been made not to supplement the dream facts, by waking experiences, that the figures are rather too small than too large:—

MEMORY, IMAGINATION AND THOUGHT IN DREAMS.  
TABLE XIV.

Number of Dreams Included: S., 133; C., 165.

	MEMORY.			EXPLICIT IMAGINATION.		THOUGHT.	
	Accurate.	Paramnesia.					
		Clear.	?	Clear.	?	Clear.	?
S.	12	27	6	10	1	23	12
C.	12	23	2	7	4	19	10

Dream 94, quoted on page 325, from C.'s dreams, is one of twenty-four called "philosophical." The record of the shorter dreams among them suggests at once that they were really not in the least philosophical or reflective in character, but mere parrot like memory of the words met over and over again in reading. I am inclined to the view that this is often the case, but a dream like "Mr. Huxley's argument," quoted above, is evidently one of thought, however inaccurate, on a metaphysical subject. Another case of the same sort is Dream 91, March 31, 6.50 A. M. (Observer C.). "Father is arguing with certain people, especially with Mr. S. One point emphasized is causality. I like father's general line of thought, but object to his view on this point. I say, 'May I speak on this subject?' Father is doubtful if there is time. I begin, 'What means a law of thought?'

Mr. S.— It means nothing.

I— But it stands for a fact. What fact? Causality is a way in which the mind acts \* \* \* \* \*.

A lady present compliments father on his presentation [of the subject]."

The so-called philosophical dreams of C. have been classified as follows :—

## PHILOSOPHICAL DREAMS.

TABLE XV.

Observer, C.

THE PHILOSOPH. CHARACTER MAY BE SIMPLY A VERBAL MEMORY.		THE DREAM INVOLVES THOUGHT.	
16.		8.	
Clear.	?	Clear.	?
11	5	6	2

The emotional quality of dreams varies greatly with different persons and with different conditions. C.'s dreams, though they are seldom actually painful, are apt to be pervaded by a generally unpleasant feeling, often rising of course to the stage of positive and excessive discomfort. To certain friends, however, dreaming is an almost uniformly pleasant experience.

The following table gives the meagre results of the attempt to define the prevailing emotions of the recorded dreams :—

## EMOTIONS IN DREAMS.

TABLE XVI.

	S.	C.
Pleasure, { Clear,	2 <sup>1</sup>	3
{ Doubtful,	—	4
Neutral—Surprise and Excitement,	3	2
{ Fear and Repulsion,	2	6
{ Shame and Mortification,	3 <sup>2</sup>	11
{ Disappointment and Regret,	—	9
{ Discomfort,	2	5
Pain, { Anger,	4	5
{ Remorse,	1	—
{ Jealousy,	1	—
{ Perplexity and Hurry,	—	9
{ Uncertain,	3	6
Totals,	20	60

Indications of volition in dreams are rarer, yet each dream record includes a few cases of well marked deliberation followed by decision, so that one may safely deny the assertion

<sup>1</sup> Includes one of class IV.

<sup>2</sup> Includes one counted before, so not added to total.

often made that the will is never active in dreams. In the following dream there was distinct consciousness of an effort of will :—

Thursday, May 7, 5.30 A. M., Dream 193. (Observer C.)  
 “I am teaching a Greek class, a freshman college class, yet it appears to be beginning Greek. It suddenly occurs to me that they can better and more easily learn the Ionic dialect in connection with the Attic. So I tell them to open their Hadley and Allen grammars at the proper point, and say: ‘Now, if you are not in my class next year, how surprised your teacher will be at what you know about Herodotus.’ . . . . At this point, a strange woman enters with some one (whom I do not know, but who appears to have some connection with the college). She begins to address the class apparently for some philanthropic object. I step forward and say, ‘I am the instructor of this class. Will you show your authorization for interrupting it?’ She answers that she has had permission, and finally shows me a certificate dated 1882, and signed, A. E. Freeman. I tell her that the date is too early to be satisfactory. She says: ‘But this permission was a renewed one,’ and shows me an earlier one. I tell her that the permission is insufficient; but she begins to speak. I interrupt her and say, ‘Now one of three things will occur: I shall interrupt you, or I shall get some one to stop you, or you will stop of your own accord.’ The woman argues with me; she is poor and needs money. [Note, added later: I am greatly distressed and divided between my wish to be generous and my conviction of the impropriety of her proceeding]. I say, ‘No matter; you should have the president’s permission’ - - - She finally goes.”

The study of association in dreams is particularly interesting, though very elusive. One may notice not only the association of the dream with the waking life, but that of the elements of a dream with each other. Its chief characteristic is the spontaneity resulting from the lack of fixed attention in dreaming, and from the absence of standards and norms of objective truth. This spontaneity, however, does not necessarily interfere with the consistency of plot, so to speak, in a large number of our dreams, which preserve one or all of the unities of time, place or interest, so that they may be called by Sully’s term, “dramatic dreams.”<sup>1</sup>

The spontaneity and freedom of dream-association are due, as we have said, to the general lack of sense-impressions. Sometimes, however, the associative train is sharply turned

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<sup>1</sup> *Illusions*, pp. 172-177, especially p. 175.

by the intrusion of presentations,<sup>1</sup> not recognized as such, or by irrelevant associations, to which insufficient selective judgment is opposed: there result what Spitta calls the "*Ideensprünge*" of dreams. The frequent breaks in the continuity of dream-life make it impossible to classify dream associations after any of the ordinary methods. Often, however, they are emotional. The persistence of some feeling of the waking life seems to determine the character of the associated dream features. From this source arise the dreams of presentiment, according either with hope or with fear.

Two quantitative distinctions of association are constantly illustrated in dreams. We often<sup>2</sup> re-live in dreams, in exact detail, scenes through which we have just passed. More often, as we have said, one very small element of a dream-image is accentuated, and followed by an associated image of which the greater part in turn fades away, leaving a small portion which is followed by its congruent image. In the first case, we have instances of total redintegration. The second illustrate modulation in association,<sup>3</sup> continued focalized redintegration.<sup>4</sup> It is needless to give examples, for everybody recognizes this quality of his own dreams. All the absurdity or incoherence of dreams is accounted for by this feature of the associative process.

The definite question of the subject matter of our dreams is partly answered through our dream-statistics about the persons, places, time and character of these dreams. The lists of *dramatis personæ* are very long, and suggest that the dream world is well peopled.

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<sup>1</sup> Spitta calls attention to the analogous waking experience "*Das Selbstbewusstsein findet sich selbst bei allseitigen Wachsein in einem ununterbrochenen Kampf mit der äusseren und inneren Sinnenwelt.*"

<sup>2</sup> C.'s dreams include two such cases.

<sup>3</sup> Dr. Scripture's term.

<sup>4</sup> James, *Psych.*, I., p. 578.

TABLE XVII.

Observer S.

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Number of times of dreaming about people.	
Family, (3)—(A 14, B 8, C 1)—23.	
Professional associates, (20)—56.	
Friends, <sup>1</sup> (69)	In W., 44
	B., 8
	H., 4
	C., 20
	Others, 18
<hr/>	
Unknown,	94
	55
	Total, 228 instances.

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TABLE XVIII.

Observer C.

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Number of times of dreaming about people.	
Family, (5)—A 25, B 7, C 11, D 7, E 3—53.	
Professional associates, (4)—18.	
Friends, <sup>2</sup> (140)	S., 31
	In N., 137
	" W., 22
	" C., 3
	" B., 12
	Others, 21
<hr/>	
Unknown,	226
	63
	Total, 360 instances.

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In the following tables the letters have the same significance as in those last presented :—

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<sup>1</sup> Of the letters under this head: W. refers to the present residence; B. to immediately preceding place of residence; H. to a place where two years were spent after leaving college; C. to the place where the childhood and greater part of the observer's life have been passed. The numbers in parentheses refer to the number of different people.

<sup>2</sup> The numbers after the headings refer (as above) to the number of different people. Of the letters under the head "friends," S. refers to one very intimate friend, very often seen, who figured more frequently than any other one person; N. refers to the present residence; W. to the institution in which the observer has been instructor; C. to college town; B. to the home in childhood.

## LOCALE OF DREAMS.

TABLE XIX.

Observer S.	Observer C.
W. and vicinity, 44	N. and vicinity, 78
B. " " 4	W. " " 7
H. " " 3	B. " " 9
C. " " 21	Other places, 11
Other places, 4	
	105
	Place unknown, 39
Place unknown, 57	No place, 21
133 instances. <sup>1</sup>	165 <sup>1</sup>

By far the most conspicuous feature of this place classification is the prominence of places associated with the life of the present. This tallies exactly with the result of the dream census of persons, by which the associates of our dreams are seen to be in large number the companions of the every day life of the immediate present; and the result falls in also with the surprising conclusion from the attempt to classify dreams according to the time in which, as one dreams, one supposes oneself to be living. In all the 375 cases which our records include, there is no instance of a dream in any other than the present time. When the dream was of the childhood's home, or of some person who had not been seen for many years, the apparent age of the dreamer was never lessened to avoid anachronism. Whatever the place or character, the subject was always at his proper age and in his general condition of life (excepting, of course, in the few cases of changed identity).

It is thus evident that the dream is connected with the waking life, and—in the experience of these observers—usually with the recent life. But what besides recency determines the exact line of association, the particular elements which, in a sense,<sup>2</sup> are reproduced in the dream? If we were discussing waking association, we should name two other factors, vividness and frequency, and should especially emphasize the fact that the subjects of conscious thought or imagination are those in which we are most deeply interested. The first impression is that the same holds true of dreams, and that the subjects of dreams are those in which our waking interest is centered. The opinion seems to be strengthened by the fact

<sup>1</sup> Dreams of class IV. are omitted, though they include some cases. Of C.'s dreams, two are omitted from class N., because they belong also to class "B" and to class "Others."

<sup>2</sup> Not a strictly philosophical sense.

of the prominence in dreams of well-known people and places yet a careful examination of one's dreams contradicts this view, as is suggested in the following table:—

CONNECTION OF THE DREAM WITH LIFE.  
TABLE XX.

	PERSONAL.		PROFESSIONAL.		TRIVIAL.	
	Gen. char.	Elements. <sup>1</sup>	Gen. Char.	Elements.	Gen Char.	Elements.
C.	57		44	82	104	161
S.	29		50		86	

This table is a very inadequate one, because of the difficulty of defining closely the terms, especially "personal" and "trivial." The former is used, in general, of dreams which are individual in their character, essentially connected with oneself, so that they could hardly be dreamed with reference to another person. Such are mostly dreams about one's own home. The trivial or accidental dream or dream-element is one so unimportant that it might equally well be dreamed with reference to another person or situation.<sup>2</sup>

The figures, however little one emphasizes their rigid accuracy, certainly indicate, what any one may verify by examination of his own dreams, the constancy of the trivial and the accidental, the tendency of the unimportant events of the waking life to reappear in our dreams, and the surprising fewness of the cases in which the dream is associated with that which is of paramount significance in one's waking experience. The so-called "personal" dreams seldom, if ever, refer to really important phases of personal relation.

A little reflection on the subjects about which one does not dream cannot fail to strengthen this view. In times of be-

<sup>1</sup>"Elements" means "parts of a dream." The classification is used with reference to dreams in which the predominant character differs from some of the parts.

<sup>2</sup>The following are examples of dreams classified under these heads:

Personal. (C.) March 28. "Mrs. S. lunches with us and we have coffee cups which do not match."

Professional. (S.) March 30-31. "Dreams of demonstrating the Wheatstone stereoscope to Prof. and Mrs. X. Neither person well marked in my dream."

Trivial. (S.) March 29-30. "Dreamed of a large party (large as a S. S. picnic), being out boating on L. pond, or some place like it. The D.'s and others seemed to be there."

reavement one seldom dreams of the dead. The fact is often denied, chiefly because of the overwhelming impression produced by the infrequent dreams of this nature, yet it is proved by the experience of all whom I have questioned, by the examination of the dream records, and by the careful inquiries of M. Ives Délage,<sup>1</sup> the only writer, so far as I know, who has faced this problem. Monsieur Délage was profoundly impressed by the fact that during a long time of deep, personal sorrow, he never once dreamed of the friend whom he had lost, though he tried to provoke such dreams. There were at least two occasions during the months of investigation when, after days of very vivid memories, one of the observers confidently expected to dream of a friend who had died, yet actually dreamed only of the most trivial events. Both S. and C. during the whole time dreamed of the dead very seldom and in unimportant connection with other persons. The scrutiny of these dream-records, in fact, bears out M. Délage's conclusion: "*En règle generale, les idées qui ont obsédé l'esprit pendant la veille ne reviennent pas en rêve; on ne rêve des événements importants, que lorsque l'époque où ils préoccupait l'esprit à un haut degré s'est éloignée.*"

M. Délage's examination of the facts is very satisfactory, but his theory cannot be accepted. Every image or thought, he says, has a definite amount of energy. If this force be dissipated by directing to the image or idea the waking attention and interest, then none is left by which it may be lifted above the threshold of the dream consciousness; but if, as in the case of a trivial event, the attention has been diverted from it and never rested on it exclusively, then when most presentations are barred out by sleep, when the ordinary activities of thought, judgment and attention are wholly wanting, or at least lethargic, then the trivial image or thought will rise into consciousness, and be transmitted through the dream alchemy into the rich and varied material of the dream.

Passing by the untenable Herbartian assumption that "ideas" possess an independent existence of their own, one notices at once that this theory fails to account for all the facts. It is not true that one never dreams of subjects of vital interest to oneself. The home, the family, the school, profession or business figure in all our dreams, and yet are of deepest interest to ourselves. All these subjects, however, are connected with persons, places or things of which we have frequent sense impressions. In the "professional" dreams (which form so large a class of Table XX.)

<sup>1</sup>Essai sur la théorie du rêve. *Revue Scientifique*, 11 Juillet, 1891.



the laboratory, the apparatus, the books, the words are the "professional" elements of the dreams and all involve sense perception. On the other hand, the persons of the dead and of the long absent, as well as the intimate thoughts, hopes and ideals of the inner life, involve the waking imagination, thought, emotion and will, but not the sense perception. The connection of the dream with the waking life, so far as it can be traced, is therefore simply this: the dream will reproduce, in general, the persons, places and events of recent sense perception or of very vivid imagination—not the objects of ordinary imagination, of thought, of emotion or of will, so far as these are not also perceived objects. Furthermore, thoughts, emotions, experiences and personal relations that mean most to us are generally extremely complex, and depend for their reproduction on the integrity of very many lines of association. When a number of these are put temporarily out of function by sleep, it is next to impossible to bring about these complicated mental states, though less complicated ones can be reproduced with tolerable completeness.

### III.

Up to this point the results of this classification of actual dreams have emphasized throughout the intimate connection of the dream with the waking life, and the essentially normal character of dream-activity. Yet the characteristics which distinguish the dream from the rest of the psychic life are no less prominent. Fundamentally these are three: the comparative feebleness of the attention and the will, the want of discrimination, and the relative lack of perception. Herakleitos says that each man has his own world in sleep, but a world in common with others when awake, and Fichte describes the objective world as created by the Absolute Ego, while the dream world is the creation of the individual I. Both sayings point to the essential feature in which dreams diverge from the rest of the psychical experience, the appearance of objective reality which prevents the recognition of their subjective character. Of this phenomenon, these three explanations have been suggested: most of the sense-impressions are lacking which furnish to the waking consciousness the common test of reality; the weakness of the thought activity facilitates that wrong application of the category of causality, implicit in the false reference of a phenomenon of imagination to an external cause and in the incorrect explanation of a sense experience; the diminution of attention prevents a scrutiny of images and ideas sufficient to the discovery of their subjectivity.

There are three stages in the dream illusion. The first is that simple objectivation which we have already described, and which is characteristic of all dreams. In the next higher stage, one attributes one's own thoughts and feelings to other individuals, sometimes explicitly recognizing one's own ignorance. Of this nature is the dream which Johnson naively describes; he was conversing with a man who said more witty things than he. Another time-honored example is that of Van Goens, who dreamed of himself in a recitation, in which after a most painful effort, he failed, only to hear his neighbor correctly answering the same question. Maury dreamed<sup>1</sup> of a person who told him the location of the place Mussidan, and of another who corrected his English sentence, "I called for you," by suggesting the idiomatic "I called on you." Both these bits of information Maury, in his waking moments, did not consciously possess.

These dreams in which the dreamer figures as the ignorant hearer of what he himself does not appear to know, are the most striking examples of this dream dramatization, but every conversation dream illustrates the same illusion.<sup>2</sup> Besides the general occasions of all objectivation, one observes here a failure of definite recollection. A vivid speech image of one's own thought is followed by the vivid image of some person, and the two are associated through lack of definite memory of the connection of the thought with oneself.<sup>3</sup>

Finally, the loss of the personal identity may become explicit. One imagines oneself to be another, or one is the double of oneself, and then there is a second self whom one sees or hears. The special feature of these dreams is sometimes characterized as a loss of self-consciousness. Spitta considers that the important differentiation of dream from waking is "*die während des Schlafens eintretende Aufhebung des Selbstbewusstseins*,"<sup>4</sup> but he makes the Herbartian distinction between *Bewusstsein* and *Selbstbewusstsein*, and declares that "*im Traume ist nur das Bewusstsein vorhanden, das Selbstbewusstsein nicht*."<sup>5</sup> The fact is that explicit self-consciousness is almost always present in dreams, and that the individual ego is exceptionally prominent in the dream life. The loss of identity in dreams is not a loss, but a change or doubling of self-consciousness. It is probably correct to explain it by failure to recall the events of one's past history, or to localize them as referring to oneself. The

<sup>1</sup> *Op. cit.*, p. 115, seq.

<sup>2</sup> Cf. dream 193, quoted, p. 328.

<sup>3</sup> Cf. Maury, p. 116, *op. cit.*; "phenomène de memoire."

<sup>4</sup> *Op. cit.*, p. 262.

<sup>5</sup> Pp. 138-139.

result is a loss of remembered experience which suggests changed identity. Yet all the time one is conscious *that it is oneself* who has changed, or whose identity is doubled. Images of qualities, actions or words belonging to others are simply associated with the image of oneself; or the connection with one's own life, one's name, relatives, appearance is forgotten simply; or these images are projected outward, as when one goes to one's own funeral or listens to one's own conversation—but always there is an observing self.

An example of the first sort of dream, which is often a sort of romance dream, is the following:—

Dream 43. Sunday, March 22, 6 A. M. (Observer C.) (I am at first the reader of a story; then the servant and then the sister of the hero; finally, I assume my own character.) A hero goes through great distresses \* \* \* runs up and down long stair-cases \* \* \* has false information given him (here, the scene is partly in Italy, looking off to the Mediterranean); finally, after eluding pursuers, the hero plunges through a sort of tunnel in the snow, which, a guide-post warns us, is very dangerous. I, his servant, follow; we are unharmed; we realize that the guide-post was treacherous. We reach, up many stairs, the home of the hero's beloved. He and I, now his sister, enter her room; she is not there. Then we enter the dining-room. He demands her. The family shudder, and one says, "*Du hast sie.*" I realize that she has died, and cry out to him, "*Ich felicitiere dich* \* \* \* She is yours now. Here, *eine untreue Familie* has kept her from you."<sup>1</sup> "It now appears that all the hero's ribs are broken. I advise him to die and join his beloved, but for some reason he refuses.—Suddenly, the hero turns into my father, whose ribs are broken, and who is questioning whether he would not better die, while I (in my own character) refuse to let him."

A frequent feature of the change in one's own identity, and of the swift transformation of one dream figure into another, is the psychical experience known as paramnesia, which is very common in dreams, though what seems paramnesia (in the waking life and in dreams) may be often the actual memory of an incident of some forgotten dream. The paramnesia of dreams appears in various forms. People or things, absolutely unrecognized by the waking self, appear in our dreams as familiar; or a familiar person is endowed with qualities—personal or intellectual—which are quite foreign to him, and well-known localities are altered in certain features. Such

<sup>1</sup> I think that all this speech was in German, but only the quoted words were exactly remembered.

illusions, it is evident, may be traced directly to the weakness of attention and judgment; heterogeneous images occurring in close succession are referred to the same external object. Our recorded dreams are full of instances of this sort. There are instances of it in the long dream (No. 193) quoted on page 328.

A very detailed example is recorded in the following extract from Dream 78.<sup>1</sup> March 29-30. Immediately before waking. (Observer S.) "----- . When I left the chapel, I took a car. There was one track that turned off very soon to the right, the other swerved to the left and kept on up the hill. It seemed to me at first that I ought to be in a car that turned to the right, and had taken a wrong one. Then I remembered 'this is the car I have been in before, and I am all right.' As I looked back out of the car, I saw something like a galvanized iron ash-barrel rise rapidly at the end of a long iron arm, and enter the opening of an enormous tin tube - - like a reflecting telescope, thirty feet in diameter. This projected from the roof of a shed, or from between the houses. It seemed rusty and in one place somewhat broken. I remembered having been over the same line before, and to have seen the tube before. [Note.—Certainly paramnesia; never saw anything of the kind] -----."

A favorite type of paramnesia, especially with one of the experimenters, was the dream of writing the records of a previous dream.

The incoherence of dreams proceeds from two main causes, one of which we have already discussed, the swift change of dream images through a process of modulated association. In this respect, the dream resembles reverie, in which also the will and the judgment are in abeyance, and the subject half unconsciously makes *Ideensprünge* from one slender perch of thought to another. The second cause of incoherent dreams is effective also in reverie; this is the intrusion of presentations into the chain of images and thoughts, and is a common feature also of dreams and of madness. As in the case of dreams, such presentations sometimes abruptly change the course of consciousness and sometimes are woven into its strands. So Maury tells the story of the madman on ship-board whose demon swore in Italian and made use of the real oaths of the sailors. But we may over-estimate the incoherence of dreams in our memory of them. It is easier to remember events which are in the line of our daily life than to recall the more or less fantastic or unusual train of dream-consciousness. So the gaps in some of our dreams may be breaks in memory.

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<sup>1</sup> A very long and "modulated" dream.

The fantastic or absurd dream to which we have just alluded is not the same as the incoherent dream, for though all incoherent dreams are in a sense absurd, these are highly fantastic and improbable dreams, which move on in stately and uninterrupted measure. The following dream is one of this kind.<sup>1</sup> (I quote only part of it):

Dream 157, April 22-23, 6.05 A. M. (Observer S.) "I dream of a kind of intelligent elephant that is to be executed by electricity, - - - and which I have charge of executing. - - - The elephant is to be fastened to the Mach (rotation) apparatus, or rather a polished edition of it in the library, or a front room otherwise nearly empty. I get things ready so far as I can, and propose to go to work the next day. - - - The elephant objects, and by degrees I come to talk the matter over with him. Am a little surprised, at first,<sup>2</sup> at his talking, but remember how intelligent an animal the elephant is reported to be, and find it very convenient to talk with him (he seems to appreciate the awkwardness of my position and talks rather kindly) - - - not maintaining that he won't smash things with all his might when he feels the current, but as yet self-controlled. - - - "

The following table gives the number of absurd dreams counted by both experimenters among those on record. Under the head "impossible" are included only natural impossibilities, like the speaking elephant, and the skull transferred by a surgical operation to the head of a living subject, not such dreams as those of meeting with people who have died. Of "very improbable" dreams an example is the "romance-dream."<sup>3</sup>

TABLE XXI.

	Rather Improbable.	Very Improbable.	Impossible.	Total Absurd.
S.	29	28	5	62
C.	42	35	3	80

The absurdity of dreams is clearly due to the weakness of the judgment. When our waking imagination confronts us with impossible images, though they have the vividness of the hypnagogic illusion, we yet correctly judge that they have

<sup>1</sup> Cf. also dream 28 (quoted page 325).

<sup>2</sup> Cf. discussion of surprise in dreams (p. 339).

<sup>3</sup> No. 43, p. 336.

not (at least in their apparent form) objective reality. In the dream we accept all images with a passive belief in their externality. It is untrue, however, to assert, as so many do,<sup>1</sup> that surprise is never felt in dreams. In the elephant dream just quoted, the judgment asserted itself in the surprise with which "at first" the talking of the elephant was heard, but the wonder was soon quieted by the vividness of the impression; it is interesting to observe that reflective thought was still present in the dream, since the peculiarity of the elephant was at once explained in true natural-history style. This possibility of dream thought, active enough to explain dream-images, but not keen enough to deny their externality, has appeared, already in the skull dream,<sup>2</sup> in which wonder at the *insouciance* with which the remarkable piece of surgery is performed, and at the deductions drawn from it, is accompanied by the complete acceptance of the fact and by much reasonable reflection on it.

It is true, however, that we constantly witness in our dreams, without a quaver of surprise, scenes and events of the most wildly improbable character. And just as the dreamer literally does not know enough to be surprised, so also his judgment plays him false in the recognition of the beautiful. I cannot recall a single distinct waking memory of any beautiful dream object, though it is common enough to dream of something as rarely beautiful which one recognizes through the waking recollection as merely fantastic or *bizarre*. It has happened to many of us to write dream verses which have seemed to the poetizing dreamer exquisitely beautiful, but which are recognized by the waking critic as sheer doggerel.<sup>3</sup>

#### IV.

One characteristic popularly attributed to dreams is open to question. It is by no means so certain as some of us think that the train of thought and imagery in dreams is swifter than that of the waking life. This assertion needs, of course, to be fortified, for there are innumerable instances which seem to prove the alleged swiftness of dreaming. The experience of Napoleon, who dreamed of a journey, a siege and a cannonad-

<sup>1</sup> Cf. Spitta, p. 138. His reasoning here is particularly specious. "Die Seele," he says, "kann nicht über Etwas in Verwirrung gerathen was sie selbst geschaffen hat." But this is exactly what "die Seele" experiences in dramatic and double identity dreams. (Cf. page 335 *seq.*)

<sup>2</sup> Dream 28, page 325.

<sup>3</sup> See papers by Miss F. P. Cobbe, *Macmillan's Magazine*, Nov., 1870, and April, 1871; and by Bessie A. Fecklen, *Scribner's Magazine*, May, 1891. The last refers to a book on "Dreams and Dream Stories," by Mrs. Anna Kingsford, which contains a dream poem of eighty verses.



ing, and woke while some slight explosion was still reverberating, to find himself in the midst of the journey; and of Mauchart, who dreamed the scenes of the reign of terror, his own arrest and trial and the falling of the guillotine, and was waked by the falling of some part of the bed upon his chest,—these are only two of the stories of which there is already a large collection. Maury tells these and others,<sup>1</sup> and gives two proofs from his own experience of the swiftness of dreams: he has often had long dreams while reading aloud to his mother, in naps which were so short that his mother never marked a pause. His brother, while talking in his sleep, used clipped words spoken so swiftly that they were barely understood.

When one tries, however, to render to oneself any definite account of a shortening of the perception of time, it is almost impossible to do so. Tissié's remark, "*Les impressions, étant plus vives, l'idéation se fait plus rapidement,*" is not adequate, for it is only occasionally that the impressions are more vivid. It is therefore more than likely that only the memory-time, not the actual conscious process of the dream, is quickened. In the free association of the dream, the representation of one event immediately suggests that of some natural consequence, which objectively must be separated from it by a long expanse of time. But in the reproduction, after waking, of these chief links in the series of images (these *Hauptvorstellungen*), the memory adds the intervening links and one believes that one has dreamed them. The vivid images of the dream become representative of the others. "*Niemals,*" says Spitta,<sup>2</sup> "*ist - - - eine Traumvorstellung genau und bis ins Detail ausgebildet.*" The retrospective lengthening of the time is more natural because the number of images, as compared with thoughts, in a dream, is always large, and the presence of many images always makes the memory-time long.<sup>3</sup> It is possible also that in many dreams of this sort which are narrated, the early parts may have been dreamed before the sense excitation which is supposed to have occasioned the whole dream. So Napoleon may have been dreaming of a siege and Mauchart of a trial before the explosion or before the blow, which were simply incorporated into a dream already begun.<sup>4</sup>

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<sup>1</sup>Pp. 132-134.

<sup>2</sup>P. 248.

<sup>3</sup>Spitta, p. 169. Cf. pp. 158-171, for discussion of the subject.

<sup>4</sup>Probably some small portion of an experience, or even a single feature of it, stands as a sort of shorthand note, from which waking consciousness develops a more elaborate account. The bare words enumerating the stages of a long experience might

A scientific discussion of dreams may profitably omit many subjects which have especially interested most of the ancient and modern writers. The question whether "the soul ever sleeps" may be relegated to the realm of metaphysics, since there is little hope of observation minute or extended enough to answer it experimentally. The importance of the dream as a revealer of character is not a suggestive topic,<sup>1</sup> when one has discovered that both will and judgment are relaxed or altogether lacking, and that the very subjects of one's dreams are unconnected with one's deepest interests. The nature of prevision in dreams and the explanation of so-called "prophetic" dreams, have received a certain modern interest from the labors of Myers, Gurney and others.<sup>2</sup> The first remark to be made is that the number and the significance of these have inevitably been exaggerated. Such dreams are seldom accurately recorded, and the after experience (the so-called fulfillment) supplies details which one then believes that one has dreamed, even when the illusion does not rise to complete paramnesia.

In the second place it may safely be asserted that a large number of these dreams admits of a perfectly natural explanation. Previsions of illness were long ago assigned by Hippocrates to real organic sensations, with which are associated images of illness. A prevailing emotion persisting in sleep is associated with the image of some event as its occasion, and in the course of time this actually does occur. Perhaps some object perceived during the day and then forgotten, determines the character of this event. Délage<sup>3</sup> gives an admirable instance. A friend of his, a physician, had a terribly vivid dream of the death and burial of his father. He waked and found beneath the door of his room a telegram really announcing his father's illness. He hastened away, cared for his father during a severe illness and succeeded in saving his life. The whole has all the air of a prophetic dream until one discovers that the telegram had been slipped beneath his door during the evening preceding his dream; he had seen it without attending to it and the blue envelope<sup>4</sup> had suggested the dream, corresponding so closely with the reality.

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serve as such signs; just the word "Hamlet" even to the waking mind recalls some of the images of the drama. This tendency of consciousness, both sleeping and waking, to coerce experience into some reasonable shape is one of the most interesting aspects of the study of dreams.

<sup>1</sup> See, for opposite view, Sully, *Cont. Rev.*, March, '93.

<sup>2</sup> Cf. *Phantasms of the Living*, Gurney, etc., II, pp. 380-443.

<sup>3</sup> *Revue Scientifique*, 11 Juillet, 1891; *Essai sur la Théorie du Rêve*, p. 42.

<sup>4</sup> This is a Parisian telegram.



Our dream records contain five cases of dreams in which there was a certain congruity between dreams and subsequent events. One is unimportant—a dream of the arrangement of articles in a magazine, and an unexpected note on the next day, with reference to arrangement of matter, at a time when this work was engaging considerable attention. In another dream, a remark is made about some one in whom the dreamer is much interested, so incongruous with the waking opinion that the dream is completely forgotten, and is not even recalled when, a month later, the same surprising story is heard and believed. This prevision, which was very exact, would have been entirely unnoticed but for the dream-record.

The other three dreams may be quoted. They all closely anticipate coming events, but are so essentially trivial and unimportant that there is no temptation to endow them with telepathic qualities :—

Dream 95. April 4-5, 4.10 A. M. (Observer S.) "Dream of visiting - - - Wellesley College. M. and I are shown over the buildings. Among other things I am taken to see a little rotunda where a register of visitors is kept - - - The floor of the rotunda is black and white marble, and has a few palms or other plants in it; it is rather poorly lighted. I think of Y. M. (a former pupil) as being there, and am not sure that I do not see her in the distance."

Weeks later, an actual visit to Wellesley was made, which had not been planned at the time of the dream; a rotunda, with the black and white marble floor and the palms, was seen; and a visitors' registry was found in another building. The suggestion of the dream was probably the casual mention the day before of an acquaintance at Wellesley, but there is no remembered occasion for the close likeness of the dream scenery to the actual surroundings. Yet it certainly is easiest to suppose some forgotten picture or description recalled in the dream.

Dream 161. April 24-25. (Observer S.) "Immediately before waking, I dream of being in O. - - - I see Dr. Y. in a reclining chair on the sidewalk - - - I speak to him and he refers to the next "Journal," saying that he can - - - easily get up matter on ether anæsthesia - - -."

The next day Dr. Y. (who lives forty miles away) makes a visit and actually speaks of the "Journal." The "prevision" is very close, but it is not easy to escape the conviction that it is a mere coincidence, for the "Journal" is a common object of thought and of perception, Dr. Y. is one of its contributors; and a piece of Dr. Y.'s apparatus may have been in the mind of the experimenter at about this time.

Dream 19. Friday, March 13-14, 11.35 P. M. (Observer C.) "I am coming from Cambridge on the cars with M. M., whose aunt will meet her at Harvard square. M. is coming from Newbury street, but will not go back home. She wears a red cloak."

Street-car dreams were not uncommon at this time, for the dreamer of them was going back and forth from Cambridge several times a week. But, on March 28, a fortnight later, Miss M. was actually met on a Cambridge car. The strangest part of this correspondence of dream and reality is that Miss M. had been more than a year in Brooklyn, and was at home for only two days. But even here forgotten suggestion seems a more likely explanation than telepathy. If in a large number of dream experiences, suggested by the affairs of daily life and peopled with the larger part of one's acquaintance, there should be no coincidences, that in itself would be a most remarkable fact.

For these formulated results of the dream statistics of only two observers, no wide generality is claimed, and there are several dream experiences, of which the records show no trace, the dream, for example, that recurs always in the same form, and the dream of childhood in which the dreamer is himself a child again. Perhaps the most important effect of the whole study is the suggestion of questions which it does not answer and the indication of the useful possibilities of such study, as is in everybody's power, of the psychical phenomena of his own life. Such investigation must be slow and painstaking; it is not likely to lead to any startling results, but it cannot well fail to bring into stronger relief old truths previously accepted on hearsay, to correct traditional views, to supplement formulæ by facts, and at least to suggest some new aspect of psychological science.