

## THOUGHT STIMULATION: UNDER WHAT CONDITIONS DOES IT OCCUR?

BY ROBERT HESSLER.

This is a subject of interest to nearly every one, but more especially to educated persons, as I found in discussing it with several hundred individuals. In a general way one may divide human beings into two classes: the educated and the uneducated. The uneducated usually pay but little attention to what is going on in the mind, what sort of thoughts they have, while on the other hand those who write or otherwise utilize their thoughts may pay much attention to the subject. Indeed, the latter may at times be worried because they can not think and cannot write, or because they "run out of" thoughts and vainly "rack their brains" for new ones. In the very beginning we must distinguish clearly between getting new thoughts or new ideas and the ability to write them out. In other words, to get the germ or plot of a story and then to write out the story to best advantage are two widely different things.

The difference between these two classes of individuals is shown very strongly in the matter of dreams. The ignorant pay considerable attention to their dreams, but only from the standpoint of "What does it mean?" They look upon a dream as an omen, while a writer may utilize a dream as a plot for a story, the dream being of actual value to him. Poets constantly tell about their dreams and of having dreamed. Again, we see this difference in attitude in the matter of the subconscious or automatic action of the mind, especially at night. There may be a great rush of thoughts. Many worry simply because they are unable to sleep on account of the "curious thoughts," while a writer may jot down a number of them and utilize them in his work.

The subject of thought stimulation may be studied from different standpoints, depending on the individual's occupation and training and the object of his investigation. Thus, the psychologist may approach it from a standpoint entirely different from that of the neurologist or of the alienist, while the viewpoint of a story writer may differ from all others. My standpoint may quite naturally be said to be mainly that of a physician interested in a study of chronic ill health as distinguished from ac-

tual disease. Many of the symptoms occurring in chronic ill health relate to disturbances in mental functioning, and hence must be given considerable attention.

If a physician desires to study normal individuals, that is, those who are neither sick nor diseased, he must go after his material. And here I might say that some, knowing my profession, have accused me of "talking shop." It is of course only those in search of a physician's services who come to him—and this paper may therefore be regarded as that of a seeker after knowledge, that is, a plea for more data from these in health. I hope that when it appears in the published proceedings some at least will take sufficient interest in the matter to give me their experiences and observations.

In regard to what I say here, it should be understood that this is simply a short abstract of a longer abstract. If I were to bring together all my data, and especially my case reports, they would make a large volume.

**CLASSIFICATION OF DATA.** For the purpose of classification as well as for convenience of study, I have divided my notes under several general subheads, as follows:

1. Simple observations on thought or mental stimulation before my days of medical schooling, such as any one not paying special attention to the subject might make.
2. Early days of medical practice. These notes are also rather simple, for it should be understood that in times past a medical student's attention was not called to the subject of mental influences.
3. Notes gathered while working among the insane.
4. Travel notes while in Europe, among them many relating to the environment of noted men and women, particularly of writers.
5. Notes, covering the last ten years, based on a systematic study of people in ill health, as distinguished from those afflicted with well-defined diseases. The bulk of my notes relate to this class of individuals.
6. Notes obtained from individuals who may be regarded as healthy, that is, not complaining of symptoms of ill health.
7. References to the literature, a comparatively small amount of data, chiefly incidental references found in biographies. This phase of the subject has been neglected, as it requires access to extensive libraries.

References to childhood are here omitted; my work concerns adults only. But we need only think of nightmare to realize how profoundly the mind of the child is influenced at times. I shall go over these sub-heads ery briefly, following the above classification.

**PEOPLE.** Some people, or minds, with whom we come in contact stimulate us, just as there are those who depress us and many who do not affect us at all.

**BOOKS.** These may also be classified according as they do or do not set us to thinking; some books act as decided mental stimuli.

**DREAMS.** Dreams may be a source of mental stimulation to the intellectual, who may get some new ideas and utilize them. The ignorant dwell chiefly on the significance of dreams as good or bad omens. One can hardly realize what an important factor dreams are in the life of some people. This topic will be considered a little more fully later on.

**FOOD AND DRINK.** These have more or less influence on our well being and our thinking. One need only think of what often occurs after eating a late lobster salad or a welsh rarebit, when the thoughts are usually anything but agreeable. There is an old saying, "Who drinks beer, thinks beer"; and another, "One is what one eats."

**ALCOHOL.** Some know from personal experience whether alcohol excites or depresses the mind; certainly all have noticed the effects in others, how some individuals become greatly excited, with an active flow of words.

**TOBACCO** should also be mentioned. Just how much truth there is in the claim of some men that they can think best while smoking or chewing is a question.

**ANGER, JEALOUSY, RESENTMENT, OR GRIEF, etc.,** may act as powerful stimuli.

**FRIGHT AND DANGER** should also be mentioned; there may be a great rush of thoughts at what seems to be a critical moment.

**FEVER FANTASY.** Those subject to colds and feverish conditions may have noticed in themselves the abnormal stimulation of thought at such times. The physician cannot avoid noticing it, especially in those delirious on account of fever.

**DRUG STIMULATION.** The most common is that of opium or its alkaloids, cocaine coming perhaps next. Hasheesh effects I have not observed. Not all persons are stimulated after the fashion of DeQuincey. Some brains are stimulated but little or not at all. The same is true of alcohol. The effect depends, moreover, largely on the dosage, varying from a more or less transient stimulation to complete stupor. It should be kept in mind that to a large extent anodynes that depress, such as acetanilid, are now used in place of opium.

**COFFEE.** This is an active stimulant to some; many know that it will keep them awake at night, as night nurses. Some persons say coffee makes them dream. Literary workers may be actively stimulated by it, their thoughts flowing freely after its use.

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**MANIA.** An individual delirious in acute mania is a sight never to be forgotten. The delirium may continue for days, even for weeks, until the body is physically exhausted. Compared with this, the amount of mental work an ordinary brain worker does seems insignificant, and the idea of nervous prostration from mental overwork is made to appear ridiculous.

**RECURRENT MANIA.** This recurs at intervals, depending on the individual, after days, weeks, months, or even years.

**ALTERNATION OF MANIA AND MELANCHOLIA.** In this there are periods when the mind is very active, followed by periods of the opposite extreme. One of my insane patients during a period of exaltation had *Cacoethes scribendi*, the mania to write, and wrote me his autobiography; it would form a fair-sized book if put into print. He wrote continuously, did not even want to take time for meals or to sleep at night.

**CHRONIC MANIA.** In this condition many individuals see visions and hold imaginary conversations; at times the brain is very active.

**DEMENTIA.** At times when there is some disease producing fever there may be a transient lighting up of the mental faculties in demented, subsiding again with the subsidence of the fever. A study of such cases often sheds light on the mental processes in the normal, or sane.

**EPILEPSY.** Epileptics about the time of an oncoming seizure may have active mental stimulation; the fact that some see visions is well known.

As a rule those confined in the hospitals for insane are quite demented, though there may be a transient mental improvement during or following some acute disease.

One of my unique experiences was the observation of the great mental improvement following the injection of erysipelas antitoxin<sup>1</sup> in an epileptic who was greatly demented; this mental stimulation, however, was only transient, subsiding on withholding the remedy, which proved too costly for continued use; in time there was a complete relapse.

**KATATONIA.** Under this head I could write some lengthy accounts relating to mental stimulation from the use of desiccated thyroids.<sup>2</sup> Individuals who had been practically dead, both physically and mentally, had a veritable return to life under the use of thyroids.

**THYROID MEDICATION OR STIMULATION.** The above experiments were continued with different classes of patients to find out the limitations or usefulness of the new drug. This was quickly found.<sup>3</sup> In a chronic maniac it brought on acute maniacal disturbance and had to be discontinued. On the other hand, in individuals who were very dull and stupid on account of myxedema<sup>4</sup> all that was required to restore normal activity was the use of this remedy.

**REDREAMING DREAMS.** A personal experience while still living among the insane first directed my attention to dreams and the part they play in daily life. My experience in dreaming a dream over and over again during an attack of sore throat seemed so odd to me that I looked up the subject in the literature, and since then have questioned hundreds. I found nothing in the literature, and until recently did not meet any individuals who had had a similar experience—for this reason I gave a brief account in the *Psychological Review* for November, 1901. It may be added that while I dream much, but few dreams, comparatively, stand out vividly and are remembered next morning. An interesting study would be to seek the causation of dreams, why at times one dreams much and then again very little; likewise why certain periods of one's life rather than others are picked out, so to speak, by dreams.

**DISEASE INFLUENCE ON MENTAL STIMULATION AND DREAMS.** Here belongs a number of notes on cases in which the stimulating influence was

<sup>1</sup> Epilepsy and Erysipelas. *Journal Amer. Med. Assn.*, May 14, 1898.

<sup>2</sup> Thyroid Medication. *Indiana Medical Journal*, June, 1896.

<sup>3</sup> Notes on Thyroid Medication. *Ind. Med. Journal*, Feb., 1898.

<sup>4</sup> Myxedema. *Indiana Medical Journal*, June, 1904.

noticed, as for instance in tonsillitis, when the mind becomes very active, with a great rush of thoughts, but without ability to hold them. After an attack of acute illness there may be a "clear brain" with active thinking. This can be explained by assuming that the brain was rested while the body was sick, or that it was stimulated by the disease or sickness, or by returning health, and now has a new set of thoughts.

Tuberculosis acts in many as a stimulant, producing especially cheerfulness and hopefulness, just the opposite from the next.

Acute Dyspeptic Attacks, as after the proverbial lobster salad. Here almost invariably the thoughts and the dreams are disagreeable, oppressive. Often it is less a question of the kind of food than of conditions under which the food is eaten. In the case of the lobster salad, the most favorable condition under which it is likely to produce disagreeable thoughts or dreaming, is, in the opinion of some, a midnight lunch after attending a theater.

Chronic Dyspepsia. This to most of us brings up thoughts of pessimism, the effects thus standing opposite to those of tuberculosis. As a supposed classical example, Carlyle might be mentioned.

ATMOSPHERE, THE AIR OF PLACES. Literary people speak of the influence of atmosphere, but this may not at all refer to air conditions. On the other hand, physicians since the days of Hippocrates speak of the air of places. From a study of the subject one might almost come to the conclusion that the locality, the environment, has as much influence on thought stimulation as on the production of ill health and disease.

WAR TIMES. In my chronological account are some data relating to a friend whose regiment was called into camp on the breaking out of the Spanish-American War. The event was a great thought stimulant to him, especially when lying awake at night.

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TRAVEL. Next in order comes a mass of data based on a year's travel in Europe. The value of travel as a stimulant to the mind is recognized by everybody. The following is taken from my notes relating to this period:

"One day, at Heidelberg, I dropped into an inn for a bite to eat. I was going to sit down before a long empty table, when I was informed that it was a Stammtisch; that meant I had to take a seat elsewhere. While eating my modest meal, there was a rush of thoughts concerning the influence of the Stammtisch on the life of German thinkers, especially

college professors, who frequently meet about such a table to exchange ideas, or get new ones, or both. Then my thoughts went to England, to its old coffee houses and the influence on the English writers who met there. That in turn brought to the mind the relative merits of beer and wine and coffee as aids to thought stimulation, and this again brought up the thought of the influence of tobacco smoke, whether this at bottom had anything to do with the matter, and that again brought me back to America, to our newspaper offices, where reporters often work in dingy offices densely filled with tobacco smoke and where many of the so-called 'pipe dreams' are concocted."

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HEALTH, ILL HEALTH, CHRONIC ILL HEALTH, DISEASE. During the last ten years I have been occupied more especially with adults in chronic ill health, as distinguished from real disease, and very naturally I have followed the subject of thought stimulation among this class. There is one very practical aspect, one, however, that is largely neglected by the average practitioner of medicine; that is, long sleepless nights during which the mind of a patient may be thinking all sorts of thoughts, usually disagreeable; if there is sleep there may be much disagreeable dreaming. The physician who is able to give patients of this kind restful nights is usually accomplishing something that his predecessors failed to do.

Individuals in chronic ill health often have very active minds and react acutely to certain drugs, such as opium, alcohol, caffeine; similarly to the salicylates, which are largely used in counteracting infection and inflammation. Many react acutely to the influence of travel. Thus while travel at home may disagree, travel in a foreign country may be beneficial. One can, of course, readily understand how in the case of literary persons one country may be preferred to another. But even common people who do not lead much of a mental life may notice the influence of travel, as when a farmer living in isolation complains of active dreaming or of restlessness at night after a trip to town. Among my case reports are at least four in which there was active stimulation of the mind while traveling on railways—in one case the thoughts or ideas were used in literary work. It may also be said that individuals with lively minds, literary people generally, react acutely to their surroundings, or to influences that scarcely produce an effect on the average man.

During the past few years I have been trying in my practice to distinguish between individuals who lead an active "Seelenleben" and those

who do not. In a general way I can divide my cases (whether active minded or not) into four groups according to their ill health.

(a) Catarrh Victims, especially those subject to common colds and sore throat accompanied by disturbance in temperature, febrile condition, with more or less "fever fantasy," when all sorts of thoughts rush through the mind. If the individual is a writer and not too ill he may jot down some of these thoughts and utilize them. In some a recumbent position is an additional stimulating factor, and, indeed, people in health can often think best when reclining. One of my friends explained it by saying: "The pressure is equalized when lying down, there is less blood in the feet and more in the brain."

Catarrh victims may or may not be cheerfully excited—those infected with tuberculosis may be very cheerful and hopeful, the opposite of the next.

(b) Dyspeptics as we all know are usually pessimistic. One of my friends has said: "Beware of the literary critic who has dyspepsia or an acute dyspeptic attack, for he will see nothing to praise in your work or effort; all is gloom to him and mankind is going to the bow-wows." The depressed mental state may not last long in an acute attack, just as in the case of the boy who has colic from eating green apples, who thinks he is going to die, although he will be as well as usual the next day.

(c) So-called neurasthenics, known also as neurotics, and "the nervous." As a rule this class reacts acutely to environmental influences, and at night there may be insomnia with the mind actively at work. As to actual work, individuals vary greatly. Many have large thoughts but produce little; some are simply regarded as dreamers. What is commonly regarded as brain tire may really be motor tire; the brain is active enough, but there is no desire or little inclination for physical exertion necessary to write out the thoughts—a mental overstimulation with a motor paralysis, so to speak.

I have notes on one case, a man who would ordinarily be regarded as a neurasthenic, who dreams much and gets new ideas in his dreams, jotting them down in the dark at night, in bed. But frequently he finds in the morning that he has no notes, for, after a dream that he wants to record, he dreams further that he is recording it or has made an entry on his scratch tablet, and then sleeps on; all has been a dream. Sometimes on awakening he retains an indistinct idea of the dream which he wanted to record.



The influence of environment may be very marked in this group, as already mentioned. Some men can do their best work in the city, others in the country. I have a curious account of a writer who habitually ran out of ideas and then went to the nearby large city to spend a day, or rather night, for he would lie awake in the dark, in his room at some large hotel, filling scratch tablets with all sorts of thoughts or ideas that came to him. It would be interesting to know whether there was any marked change in blood pressure, whether he may not have belonged to the next group.

I shall refrain from citing more such cases, for to make reports valuable they should give a lot of details, or we may be wholly unable to draw conclusions regarding possible causes. In a general way it may be said that the more details in a case report the better.

(d) A group of cases that may be called cardio-vascular, in which there are disturbances in the blood pressure. At times of a high blood pressure there may be great mental activity. Brief mention may be made of a few cases.

Mrs. A. Middle-aged woman with a persistently high blood pressure, rarely under 200 mm, and often much above that, even to 250 mm. Complains of the mind being very active, all sorts of "komische Gedanken" passing through the brain; but at times of unusually high pressure the thoughts are anything but comical, the "Gedankenflucht" being the opposite; she at times fears enacting a tragedy. When I add that my own pressure runs from 100 to 110 mm, the significance of a pressure of 250 mm will be better understood.

Mrs. B. Elderly woman, gloomy and worrying thoughts both on account of ill health and possible financial difficulties. To distract her mind, to change the trend of her thoughts, her relatives nightly took her to a crowded revival meeting, but it was quickly found that conditions grew worse, and that the rush of thoughts seemed to prevent sleep altogether. She came to me and I found a high blood pressure. Simple medication and remaining away from the meetings caused the high pressure to disappear within a week, and the mental disturbance to subside, followed by a philosophical state of mind with cessation of worry.

Neither of these two individuals is intellectual; they do not utilize their thoughts.

Mrs. C. Middle-aged intellectual woman. Great rush of ideas at times of occasional high blood pressure, especially at night, often prac-

tically sleepless on this account. In the day time felt too fatigued, tired out, to be inclined to exert herself physically, but the mind would perhaps be very active. Often had "bright thoughts" at night and wanted to get up and jot them down, for she was unable to recall them the next morning, but her physician had told her not to do this, as it would aggravate her insomnia. When she came to me, I promptly advised her to jot down her thoughts, that with a little practice she could do this in the dark: at the same time I instituted measures to reduce the blood pressure—and when the pressure went down the automatic action of the brain ceased and sound sleep returned. How to bring down a high blood pressure is a medical question that need not be discussed here.

Mr. D. Middle aged man in whom a tendency to increased blood pressure gradually developed, along with much dreaming at night and subconscious mental activity, the thoughts coming at such times being utilized in his work. Problems and matters awaiting solution would be taken up and worked out at such times. This subconscious activity was always orderly, entirely different from that of dreams, for in the latter there were all sorts of incongruities and anachronisms. A change in environment caused the high pressure to subside and with it the subconscious mental activity, but the dreaming continued as formerly. Now and then there is a period, or it may be but a single night, of automatic activity, and the question is to find out the why and the wherefore of this activity.

Mr. E. The most literary man in a small community; past middle age; mind always at work. Came to me complaining of symptoms of ill health. I suspected cardio-vascular disturbance and on examination found a high blood pressure. I at once proposed a systematic examination, with health supervision. But to be literary does not necessarily imply the possession of good common sense, and instead of following my advice, given him at length, he adopted an easier and simpler course; he changed doctors. He went to a man who merely gave him a little medicine. A short time ago he died suddenly of cerebral hemorrhage.<sup>1</sup>

Ordinary people when they have a rush of thoughts at night may simply worry because they are not able to sleep, whereas the brain worker who utilizes his thoughts may welcome at least an occasional such rush

<sup>1</sup>There is a possibility that in this case arterio-sclerosis had set in, but I am inclined to believe there was none at the time he came to me. It should be kept in mind that in this paper I am excluding children and the aged, as well as those afflicted with well-defined diseases or pathologic processes.

of thoughts; because it may furnish him material, data, plots. He may even seek to bring about this condition, or what is commonly called "inspiration." In this connection I might mention one case which may shed some light. A middle-aged literary woman had been complaining of disturbed heart action, marked especially by arrhythmia. In order to correct the difficulty, her physician prescribed digitalis in larger doses than is usual. In a short time her mind became very active, with sleeplessness at night and with a great rush of thoughts. She then came to me and I promptly had her discontinue the digitalis, when the mental excitement subsided. The supposed heart disturbance itself was treated by methods other than drug treatment.

To what extent high blood pressure is a factor in thought stimulation in normal individuals I am unable to say. To study that will require "material." If, as earlier stated, the physician wants to study those in health he must go to them, and seek out those whom he thinks suitable for his work. Moreover, a physician never has that complete control over his "material" as the biologist. He can take up or leave off work at any moment; the physician must get the consent of his patients. Even the hospital physician has a great advantage in this respect.

It would seem a natural and simple inference that the increased circulation in the brain stimulates the cells, and thereby stimulates thought—and then at once the question arises, What brings on increased blood pressure?

**BORDERLAND CASES.** Just where the normal shades off into the abnormal or where "perfect health" changes into "ill health" is often difficult to determine. There is no norm, there are no standards; what agrees with one may disagree with another. I will mention a few more factors which in some individuals play a role in thought stimulation.

**MUSIC.** The mind or imagination of some people is strongly excited by music. When one critically studies cases he may be able to make distinctions between the influence of grand opera and rag time music, and whether the music is heard indoor or out of doors, as on a street corner or in a park.

**THEATER.** Attending a play may bring on a lively "play of the imagination."

**CHURCH.** A merchant once told me that he did his best business thinking or planning while apparently listening to a long sermon. And I

know of a college student whose thoughts were most active while "listening to a sermon." Such stimulation is known to but few, while the opposite, drowsiness, is known to nearly everybody. Perhaps the "constitution" has something to do with it. I have notes on a preacher who gets his ideas for his next sermon a week ahead. If he fails to get them on Sunday night, he probably gets them at the time of the midweek prayer meeting. Local option meetings also seem to excite some—is it the enthusiasm?

**STORMS.** Among my case reports are some of individuals whose minds were set agoing during the prevalence of a storm; if at night, there was much restlessness and sleeplessness with a rush of thoughts. An inquiry into details often leads to curious results.

**WEATHER CHANGES** should also be mentioned. The state of the weather is by many supposed to have an influence. I should especially like to hear from those who have made any observations along this line.

**BOOKS.** Books, as a source of thought stimulation or of inspiration, are generally classified as good or bad, ancient or modern, new or old. To the average reader a book is simply a book, but those who utilize their thoughts or bright ideas may be able to make distinctions. Reading between the lines, an individual with a vivid imagination may get all sorts of new ideas, he may get more out of them than the author put in.

**LECTURES** differ greatly in their stimulating influence. To some an occasional lecture may be helpful, while repeated lectures may fail to stimulate, or one may say there is overstimulation and the mind fails to retain the impressions. We all know how the lectures of instructors vary; some stimulate the students, others do not.

**BARBER-SHOP INFLUENCES.** One of my old patients, who lived at home all the time, went once a week to the barber shop, and then complained of insomnia with much dreaming at night. (But to make the story more complete it should be added that he was a chronic consumptive and that much coughing accompanied the insomnia and dreaming—some might regard this as a relationship of cause and effect.)

I recall a statement in a French reader, "Nothing refreshes the mind like having the hair dressed." A man is supposed to have made the remark—I mention this here as a possible factor in mental stimulation in

women, as they often spend much time in dressing the hair. Perhaps that statement is on a level with that of the poet who spoke about "scratching the head, thinking the thoughts would come," etc.

EXERCISE may be an essential to a writer or sedentary thinker, as for the man who writes all forenoon and puts in the afternoon walking, riding, rowing, gardening, etc. Here one would have to distinguish between properly working up ideas and getting new ones, between resting the brain by a different occupation and getting new thoughts while so occupied; the new thoughts may perhaps come involuntarily while physically employed.

BATHS of various kinds seem to be a stimulant to some persons.

"BEING IN HARNESS" is an important factor, as in the case of the business man who could not think, could not plan, while on a vacation, but the moment he returned to his dingy office his mind became very active. One man of affairs told me he would rather wear out than rust out, meaning that although he felt better physically while away from his old occupation his mind was dull; he would rather not feel so well bodily than to have ennui and boredom.

#### SUBCONSCIOUS MENTAL ACTIVITY.

Perhaps the most interesting phase of the whole subject is that of so-called subconscious cerebration, with its various synonyms, such as automatic cerebration, unconscious cerebration, etc. This form of mental activity is to be clearly distinguished from conscious activity on the one hand and from dreaming on the other; it is neither. Thus, while writing these notes, an old patient to whom the question was put gave me a good illustration.

This woman is a clerk in a county treasurer's office (I am not naming the county). Ordinarily she does not dream, or so lightly that few of the dreams are recalled the next morning. She has what may be considered good health, but at times does complain of some minor ills. Twice a year she works under great stress, at taxpaying time, when from early morning till late at night she is at the office, taking in money and receipting for it. After a day or two of this hard work she continues the work at night, "in her mind," to the exclusion of sound or refreshing sleep—the mind automatically and in spite of all her efforts to prevent going over and

over the work of the day. On account of the loss of sleep, etc., she begins to suffer in health, and feels sure that at times if there were a few more days of it she would break down. But she admits one advantage of this automatic action of the mind or brain: Errors are constantly occurring, and when the books are balanced at night no one can account for the various discrepancies, and, of course, there is worry. Now in her "night work," during this automatic cerebration, she generally "sees" just where the discrepancies are and the next morning is usually able to make the corrections promptly.

She has some well-defined ideas regarding causes, that is, of the conditions under which such activity comes on, and I shall consider her remarks later on in summing up "causes" and "supposed causes."

Asked about dreams, she said they occurred in the winter time, rarely in the summer—the exceptions usually being times of actual illness.

Another patient told me that as a boy in school he worked out his mathematical problems while in bed at night. After he left school this form of mental activity largely disappeared and now only occasionally returns; he utilizes it in planning his business affairs.

**INSOMNIA.** After a wakeful period at night, perhaps of an hour or two, there may gradually come repose, and then when one is about to fall asleep, subconscious mental activity may come on with a flow of thoughts, perhaps valuable in one's work. Then comes the conscious thought, "If I don't jot down these thoughts or ideas they will be lost; if I do write, then the composure to sleep will disappear and I will again be wakeful and sleepless. Shall I write or not? Shall I put the thoughts on paper or get the sleep?" While undecided, sleep may come on, there may even be a dreaming that the thoughts have been written: the mind is relieved and deep sleep follows. In the morning nothing is remembered of the train of thoughts. If, however, they were written out, then on awakening the whole occurrence likely comes vividly to mind, or at least there are notes more or less clearly decipherable. This may also occur in the morning when one is about to turn over for another nap, and then this mental activity is confused with dreaming, but the coherency of ideas enables us to distinguish.

Sleepless nights of active minded people who utilize their thoughts are often due to the fact that they do not want to let go of the thoughts that come. They lie awake, thinking about them, or they will be kept

awake by the very act of writing them down. When the mind is relieved and sleep is about to come, there may be another train of thought, and this too must be disposed of. This may recur over and over, and as a result there is a sleepless night. Insomnia is usually considered the bane of the brain worker, but perhaps after all it has its compensations.

Some individuals can distinguish very clearly between dreaming and subconscious mental activity. Some who utilize their thoughts refer to the latter as "inspiration," and in their attempts to bring on such a condition have tried all sorts of experiments. In reading biography one at times comes across statements that seem to refer to this condition of mind, as when Voltaire or Pope in the middle of the night called for his clerk or stenographer to take down a train of thought. This form of mental activity occurs in all kinds of persons, but as already mentioned is most marked in brain workers. The question naturally arises, What is back of it all? What produces this form of mental activity? By gathering a large mass of data one may be able to arrive at some conclusions. One can not solve the problem from a study of books, it must be studied in living persons whom one can question about details and antecedents.

Here again my own observations have been confined mainly to those in ill health. To what extent automatic mental activity is a question of medicine and to what extent a problem in psychology may largely depend on the individual studied, as well as on the student—on his knowledge and purpose. But we should not forget that the modern psychologist studies and investigates largely by the use of instruments, in his laboratory.

To study the influence of blood pressure requires the use of a sphygmograph, and that means that the study of thought stimulation due to the changes in blood pressure is beyond the man who makes but simple observations. The man not connected with a laboratory might, of course, seek out a physician who makes blood pressure tests and would interest himself in the subject.

On the other hand, auto-observations of what is going on in one's own mind are or can readily be made by any one who will take the trouble to observe, no apparatus being required, unless it be a watch or clock to note the time of day or night and a fever thermometer in the case of those who have "fever fantasy"—which may or may not be distinguishable from the mental activity unaccompanied by fever or dis-

turbance in the temperature of the body. At times the mental stimulation may be wholly out of proportion to the rise of temperature, and I have had cases where there seemed to be a high temperature, judging by the redness of the face and the complaints of the patient, and yet the thermometer failed to reveal any elevation of temperature. One has to distinguish between "feeling feverish" and having a real fever, that is, an actual elevation of temperature.

Just now a fad has spread over the country which gives undue importance to this form of mental activity in the treatment of ill health and the cure of diseases. It would seem that there are two kinds of psychotherapists, the real and the pseudo. The former limit themselves to so-called neuroses and functional disturbances, while the latter ascribe subconscious mental activity to practically everything—except perhaps to the healing of broken bones.

I have already referred to the fact that some individuals make sharp distinctions between dreaming and subconscious mental activity or subconscious cerebration. I myself believe these are two different processes but one will have to give close attention to what is going on in the mind to enable him to discriminate. As to the possible existence of a "subconscious mind," as an entity, that is another question. Perhaps it is synonymous with the "soul" of the old philosophers.

QUESTIONING ABOUT DREAMS. In questioning people about dreams one quickly learns to divide dreamers into three classes.

There are those who "wonder what it means," who are constantly speculating on the significance of a dream. Some will tell of having heard some one telling of seeing a certain event in his dream and found that very thing to have actually occurred at the time and place indicated in the dream. They will tell of it in detail, if one listens, and then ask. Now how do you explain that? Personally, I have never had such a dream, one in which I "saw in my dream" events or incidents that actually happened, either at the instant the dream occurred or the next day or next week, or at any time. Neither have I met a single individual who had such a dream or "foresaw" an unusual event. When we consider that out of thousands and thousands of dreams some one may have noticed such an incident, we must conclude that it was simply a coincidence, as where during a thunderstorm at night a relative or a friend exposed to the storm "is seen," either struck by lightning or being near the place where it did strike.



Now it would seem quite natural for one when awakened by the peal of thunder to think of his relative, and the sudden thought may be mistaken for a dream. Even if it were a real dream and "came true" it must still be regarded as a coincidence, as one instance out of thousands of dreams the rest of which did not come true. We hear of the particular one, and as just remarked, at second hand, or even a number of removes from the original source, to the neglect of all dreams that did not come true. At times we see a mention in the newspapers of dreams that "came true."

A second class is composed of those who pay no attention whatever to dreams, and also those whom one can not interest in the subject at all, who may even express disgust at the very idea of giving a dream a second thought. This class is as unsatisfactory to the student as the other.

Those who do give some attention to dreams and may be made to take additional interest when their attention is called to the subject form a third class—the class I have in mind in this paper. They are comparatively few—but, as in other things, to the few we owe our increase in knowledge.

Out of the long list of factors and conditions enumerated in this paper only a few, perhaps only one or two, may play an important role in the life of any one person: to him, however, they may be essential. As an example, we have the man who requires the quiet of the country, or on the other hand, the man who requires the stimulation of city life.

In asking for data one can put the question in several ways: In the case of those who have occasional periods when the mind is very active, we can ask, "Under what conditions does this occur?" "What causes the mind to become thus active?" While in those whose minds are nearly always active, but where there are occasional intervals of inactivity, when a man says, "I can't think," we may ask, "Why not?"

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As an addendum may be mentioned several other factors that stimulate the mind and bring on thoughts.

Trying It on the Audience—"for further inspiration." I recall how Dr. Jordan used to do this before his classes in Evolution, as he himself told us. I have often wondered how much inspiration he got from a dull class.

An Assigned Task, as a factor, as where a member of the Academy sends in his title, and as the time for the meeting approaches gradually

"gets busy," knowing that his paper must be ready at a certain time—for instance, myself during the last few days.

Finally may be mentioned the Annual Academy Meetings as a source of stimulation and of inspiration, especially to those of us who live in isolation. This is a factor in thought stimulation not to be undervalued.