

THE ILLUSION OF LEVITATION

Part Two: Clinical Aspects

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Foreword

In this second section it is intended to furnish a more definite picture of the Illusion of Levitation than was presented in the first outline. This is done by a second letter to Dr. Prince, which amplifies the first.

The instances quoted are taken from the case histories of subjects studied by the writer at various institutions in New York City, including the Post Graduate Hospital, the Vanderbilt Clinic, the Physiological Laboratory at P. & S., and the Laboratory of the Department of Psychology at Columbia.

In observations of this kind upon the phases of sleep, it has been a most helpful and steadying circumstance that a student like Morton Prince should have stood ready to give aid and counsel.

Dr. Prince has realized that Abnormal Psychology demands of its devotees that they shall be willing to examine the "improbabilities" of mystical belief as well as to follow the "safe and sane" paths of staid laboratory demonstrations. To emphasize this open-mindedness, to which I pay tribute now, Dr. Prince's own words may be quoted from the correspondence:—

In this connection do not let yourself be hoodooed by any set of "authorities" with whose views your observations are not in accord. Make your own observations and so long as they are accurate and incontestable you have nothing to fear. Be careful only not to force interpretations beyond what the facts warrant.

With due respect both to those who insist upon adventuring into mystical realms, and to those who sedulously abstain therefrom, the natural history of the Illusion of Levitation will be carried through to a physiological analysis in the next instalment.

The statement below is intended to bring out the salient features of the Illusion of Levitation when it is dependent upon phenomena of general relaxation and of sleep.

COLUMBIA UNIVERSITY,

JUNE 6, 1912

My dear Dr. Prince:

As a post-script to my letter of April 17, let me submit a few examples in connection with the process of relaxation that I described.

Lately, having again taken up these experiments I have had my attention called at various times to analogies between the state of relaxation as produced or induced experimentally on the one hand, and on the other to certain peculiar states that occur spontaneously. The analogies are not so much perceived by me as they are suggested to me by those on whom I have experimented or with whom I have talked over the method and its results.¹

"PROJECTION" OF SENSATIONS

Case 80. A Jewish boy of 19 treated for anxiety neurosis. As a means of helping him to sleep I taught him how to relax, using the usual dialectic method and adding a few exercises for relaxing the eye-muscles. He proved a very good subject and presently experienced the sensations and changes of muscular tonus that I wrote of in the foregoing letter. At the onset of the sensations he said: "I have felt like this before; it used to come over me, this feeling; but I was scared of it and used to try to make it go away." When I explained the matter to him as merely a by-product of rest, he was perfectly willing to continue in the existing state of ease and even seemed to think it wonderfully agreeable. Wishing to impress the sensations upon him I said, more forcibly than accurately: "I want you to remember what you have done now, so that you can rest like this again. Don't forget how you did this." To which the boy responded: "How should I forget how to do this, when it is not me that is doing it?" "Who is doing it?" "I don't know, it just comes of itself."

ALARMING WAVE CHARACTER

I mention this incident to illustrate the *projected* character of the sensations in question. To be sure the projection in this case is not very marked, but still there is a suggestion as if a foreign influence were exerting itself upon the person. In my earlier experiments this was more marked. One subject who

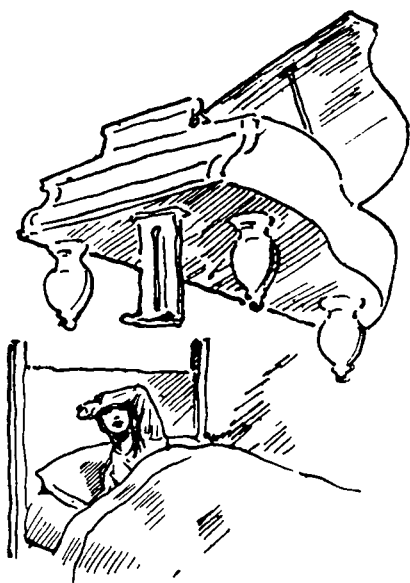
¹This method has for years, among my co-workers and subjects, borne the name "Acopic Method"—from the Greek (*alpha* privative and *kopos* fatigue) meaning anti-fatigue. See Century Dictionary.

learned to relax very completely was very much impressed with the sensations in relaxation. He actually argued with me at one time that they must really represent the influx of some force. In another case a man describes his experience in the following terms: "There were waves in the room; it was as if the air were in vibration, and I thought that it seemed to be a force that placed me in communication with a certain patient whom I had asked to relax at the same time. It was the most extraordinary experience I ever had and caused me to be alarmed about continuing this work."

The former was a lawyer of the highest intelligence and the latter was a clergyman, who had done a little psychotherapy and who had tried "absent treatment" in its non-mystical form; I mean encouraging a patient to relax and think thoughts of health, while the healer by appointment was relaxing and meditating in another place.

But let me go on with cases more in point.

Case 95. A psychologist, instructor in one of the big Universities. He had been my subject in experiments conducted by me in 1910. Lately, in discussing the method of relaxation he said: "I meant to tell you about a sort of waking dream that I used to have. I would be lying on the bed and I would see a large heavy piano that we had, floating in the air. This was when I was a kid, ten or eleven. I would imagine I saw this piano getting larger and larger and soaring in the air above me. And I would be afraid that it was going to fall and I would cry out and the family would not know what was



EXTERNALIZED ILLUSION OF
LEVITATION

the matter with me, for I could not seem to tell them. Presently the piano would stop getting larger and would seem to fall and I would expect that there would be a great crash but it never came. Then the thing would pass away."

SENSATIONS OF SWELLING AND RISING

Case 88. A woman, graduate student in biology. She took a great deal of interest in my experiments and wanted to hear all about the different stages of relaxation, (which is information I do not give to those who are to be my subjects). Although not a subject, she gave me the following description of similar sensations she had had: "I used to feel myself beginning to swell and it would bother me, because I did not know what to make of it. I seemed to get larger and larger as if I would never stop expanding. But presently it would stop and things would become natural again. I have asked my doctor about it, but I have never found anyone who understood it, except one woman who had the same sort of experience. We exchanged notes on the subject. It was very curious and used to come quite often." "Was it pleasant?" "Yes, it was pleasant, except that it was so queer." "Do you have it now?" "No, I have not had it for several years."

Case 101. In my own case on one occasion I dreamed of seeing a golf-ball soaring in the air, and rising in a beautiful lofting curve above a bunker surrounded by water. I seemed to be accompanying the golf-ball in its flight, as if I were in some way identified with the ball. I could see the ball and the changing vista beneath us, but I was not there in *propria persona*. In the next part of the dream I was crudely impersonating a golf-ball propelling itself through a muddy golf course. I omit the symbolism of the second part wishing merely to point out the two degrees of impersonation in the dream. In the first part of the dream the flying sensation or levitation illusion was very marked and seems to account for the partial projection of the illusion, so that it is not exactly I, but rather the golf-ball, to which the flight is ascribed.

THE SENSATIONS BEREFT OF ILLUSION

In earlier cases I have experienced the floating sensation while relaxation was in progress and while perfectly oriented otherwise. Its onset was brought about by a deliberate process of relaxation but without any expectation of the illusion of soaring. The insight thus acquired changed for some time the character of my flying dreams, by robbing them of the illusional element. I would simply feel myself soaring in my sleep, but would not apperceive it as a flight; for I would recognize the true character of the experience and relate it to my waking experi-

ments. The identity between the illusional and the non-illusional levitation phenomena, however, must be unmistakable to anyone who has experienced the several varieties, as I have.

Now let me mention the fact that often the floating sensation is connected with a tingle. I have had it several times in such a way that the tingle resembles the strongest reaction after a shower bath. It has come to me at other times locally as if there were a thready tingle in different parts of the body. I never had paid very much attention to these things nor had taken any careful record. But later two subjects, independently and in almost identical terms described a tingle, as follows.

Case 71. "While you were talking and I was relaxing I felt a sort of twitching or tingling. It seemed to run from under my eye down the side of my face near the nose. I never had this before."

Case 78. "I had a queer sensation. I did not know what to make of it. It was a kind of a prickly sensation just in one place, I thought I would have to scratch it. It was along the thigh as far as the knee. I don't remember ever feeling anything like it before."

VASO-MOTOR FEATURES

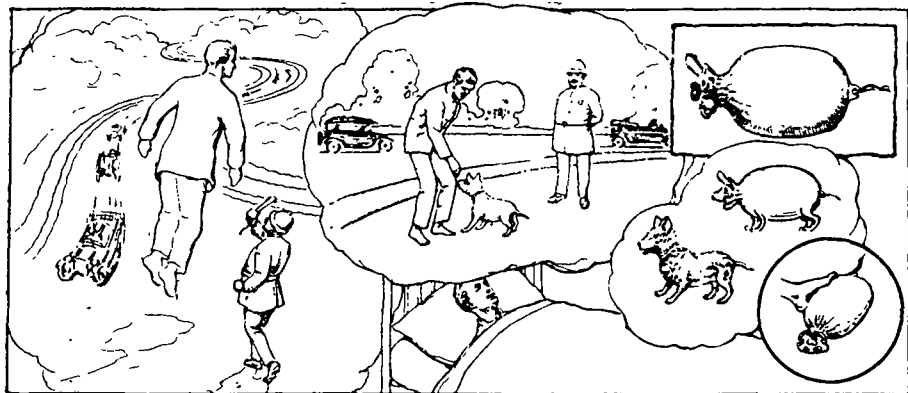
My theory for all these phenomena is that they are connected with vaso-motor activity. The theory seems worth stating even before I have given you all the cases and all the threads of thought that make it appear plausible. The swelling of the body is evidently, to my notion, a projected sensation due to vaso-motor relaxation of skin vessels. The floating sensation is due to the numbness or diffusion of sensation caused by the vaso-motor relaxation plus (and this is more problematical) a more or less real inhibition of the pressure sense. All these elements of explanation are referred to in the letter of April 17.

Now as to the tingle, my own feelings during relaxation indicate that it depends on the rapidity with which the vaso-motor dilatation takes place. In one case, already reported to you, the dilation was so rapid that I felt light in the head and had an illusion of falling. No anxiety attended this phenomenon. From the beginning of the tingling I knew, or thought I knew what was going on; for I had had quite as marked a tingling once before, it having come to me in the earlier instance as my first intimation of the vaso-motor character of the floating sensation. Altho' not prepared for the dizziness which followed the sudden relaxation of the body or skin vaso-motors, its "explanation"

flashed upon me before the illusion of falling got a very strong grip on me. There was no room, it would seem, for me to put any elaborate fancies in between two facts so clearly perceived and coming so closely in connection.

BREEDING GROUNDS OF THE ILLUSION

But suppose similar physiological phenomena occurring in a different psychological setting. It needs no great stretch of the imagination to conceive of cases where experiences of peace and relaxation would be obtained through more or less mystical practices, such as the meditations of the saints, the contemplation of the buddhists, the reading of *Science and Health* at the bedside and so on. This implies in each case a rather wide ranging of the mind through realms of conjecture and pseudo-



A SECOND EXAMPLE OF LEVITATION IN DREAMS

Dependent as in Former Case upon Vasomotor Changes

This is a faithful, if somewhat labored, picturization of an actual dream known to have been elicited by vasomotor warming of the body surface, in response to cold while the dreamer was in bed; thus it depended upon a reaction of the mechanism that regulates temperature.

The dreamer fails to apperceive correctly (*mal-apperceives*) the corresponding sensations; these being in the main: 1. Changes of pressure from the suffusion of the blood through skin and muscles, in addition to actual pulsations. 2. Joint and muscle sensations of the dreamer's actual movements, automatically initiated in pursuit of comfort (*warmth*).

The apperceptive errors belong in the class of "trial apperceptions," as explained by the writer in the *Journal of Abnormal Psychology*, vols. for 1915-16 and 1916-17. (See also critical review of the theory in *Psychol. Bulletin* for January, 1918.)

The above statements apply exactly to the previous example, in which the dreamer ends by drawing up his legs under him and obtains an illusion of levitating in that position. In the present instance the final heat-seeking movement leads to the passing of the foot over the varied surfaces of a hot-water bottle, made of rubber and sheathed in a furry cloth bag. The resulting spatial and tactual impressions are thereupon "transposed" from the sensory field of the foot to the psycho-sensory field of the hand—a *mis-reading* of "loca' sign."

The initial sense of vasomotion gives rise to the illusion of floating like a balloon or inflated dummy, which swings in the way of the traffic, obliging the rapid vehicles to swerve sharply in their course along the already undulating parkway.

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science in which anyone can find much material to enrich and overlay the sensation I have described, covering it almost out of semblance to the original. Does not Ethel Puffer in her chapter on the Esthetic Repose call attention to just such illusory accretions? It remains for us to divine the underlying physiological facts. "My soul swims in the Being of God as a fish in water," says the humble Beguine, Mechthild. Again the theosophist feels his astral body floating away and visiting over the world. A book could be written full of instances of this kind that would show a perfect series of such illusions, all of them conceivably built around the actual sensations that I have encountered in their bare state among my subjects.

Here is a case in point, which has never been explained and which is quoted in Professor Muensterberg's *Psychotherapy*. I think that you will concede the close connection of this case with the cases I have cited in this post-script and in my original letter.

"My condition was horrible in the extreme. I had consumption of the lungs and other supposedly fatal troubles, complicated by wrecked nerves. (Here follows the lady's account of the visits of a Christian Science healer) . . . At noon she left me to go to her home for lunch.

RECONSTITUTION

(Experience as related)

Cf. "Mid-State" of attention.

I was pondering seriously on her reiterated 'God is love and fills the universe and there is nothing beside Him,' when I suddenly had a sensation of being lifted up or rising slowly and becoming lighter in body.

Sudden dilation of the vaso-motors.

A rush of power that I have no way of describing to you filled me. I seemed to be a tremendous dynamo

The inhibition of pressure sense.

in the air several inches above the ground and still ascending.

A particular diffusion of sensation of which more anon.

When I noticed everything around me becoming prismatic and more or less translucent,

RECONSTITUTION*Ligh'tness again*

I could have walked on water without sinking, and I had a distinct understanding that matter seemed to be disintegrating and dissolving around me. I was

Alarm.

frightened but self-conscious and quiet. I remained in this state for about three hours, my consciousness seeming to have reached
ALMOST 'COSMIC' GREATNESS.

The swelling sensations.

The altruistic "desire to show how" of the typical Flying Dream turned to therapeutic account.

Vasomotor relaxation and consequently greater beat of the pulses.

The "return to earth."

Was this experience healthful simply because it served to remove inhibitions existing in the Function of Repose?

I could have cured. I felt, any human ill, was filled with an absorbing altruistic desire to help suffering. It was tremendous and totally foreign to my every-day attitude. At the end of the day, towards twilight, I became wearied of the TREMENDOUS THROBBING and exalted state in which I still remained and gave utterance to the thought aloud. Almost before I had formulated it the condition left me, and like the sudden dropping of a weight, I struck the ground, the same dull, ordinary person of every-day experience, but with the vast difference of perfect health, radiant and lasting to the present writing. My father like myself is baffled and wondering. We are both pretty hard skeptics. I want the truth, whether it be terrible or otherwise. I am profoundly grateful to the Christian Scientist, if I regained my health through her ministrations, but I have not so far been able to label myself and rise in their church services to tell what has been done on me. The performance repels me as crude and rather bad taste. I swear to you on my honor as an American woman and mother that what I have written you is true, absolutely. If you can give me any light or if my experience may perchance give you a helping ray, my renewed lease on life may have had some purpose after all, which I have questioned in my cynical moods."

"The unprejudiced psychotherapist, adds Professor Muensterberg, will be perfectly able to find room for such cures and, if it is the duty of the scientific physician to make use of every natural energy in the interest of the patient's health, he has no right to neglect the overwhelming powers of the apparently mysterious states." (p. 317)

IMPEDIMENTS TO A SCIENCE OF REST

My object in writing of my experiments is to bring within the pale of science a number of "natural energies" that are at present the possession of more or less confused mystics. The association of the rest-states with mystical practices is the greatest source of difficulty that I find in presenting the facts. I am hoping that if these facts are published under your auspices this difficulty may disappear.

Yours very sincerely,

L. H.

(*To be Concluded*)

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The various items are fanciful reproductions of memories of the park at Morningside Heights. The emotional tone of the Irish policeman is anger, which gives way to complacency when the dreamer, now deflated, sets foot to the ground (contact with hot-water bottle) and pets the dog's head. The policeman is obviously an externalization of the dreamer himself—an *alter ego*.

Such is the stuff that dreams are made of.

The analysis, or rather *inventory*, cannot be completed here; but this fragment may serve as an earnest of the type of explanation that is to follow. The physiological treatment ("*re-constitution*") here sketched should serve, in respect of Flying Dreams at least, to give a quietus to the rather wild guesses of the Freudian school. Havelock Ellis has gone farthest in the right direction by recognizing "Aviation in Dreams" to be due to physiological mechanisms operating in sleep, rather than to wish-fulfillments. The detailed consideration of these mechanisms will form the subject of the next instalment.

Consult Havelock Ellis, "The World of Dreams," 1911, Houghton Mifflin & Company; note especially the sixth chapter, which appeared in the *Atlantic Monthly*, 1910.