

either the pure relativity of Spencer, or the absolutely blind unteleological movement of the Schopenhauerian Will.

There is every motive then to look for a teleological, prospective reference of mind, as a constitutive element in the retrospective categories themselves which the Kantian critique had looked upon as static and unchangeable: above all to give it a psychological basis, for the metaphysical application will not be far in the rear.

Though the preceding study may not have been in any way of the nature of a supply to this demand, it yet affords grounds, we are convinced, for a somewhat more emphatic repetition of the poetical but keenly intuitive protest of Emerson against the Kantian description of Intellect and Will: "Our intellections are mainly *prospective*. The immortality of man is as legitimately preached from the intellect as from the moral volitions. Every intellection is mainly prospective; its present value is its least."¹

JENA.

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OUR LOCALIZATION IN SPACE.

The title to these notes may appear misleading, but I know of no other to describe the phenomena which I wish to illustrate by an interesting experience that occurred to me about a year ago and that I have narrated to my classes for suitable purposes. Perhaps it will be interesting to others.

Only twice in my life have I awakened in dream and at the same time had the dream images continue for a short period so as to watch them as apparently real objects. The first one was a dream of a mountain scene in a valley with a lake and summer hotels on its shore. I watched the view for perhaps a full minute with my eyes still closed, but conscious of being awake and lying in bed. The disappearance of the scene was marked by the visible occurrence of small clefts or openings in the rocks nearest where I appeared to be standing. The scene was perfectly vivid and real, an exact representation of what such a scene would be, if I were actually looking at a landscape, projected outside of me. The *eject* of reality and actual space relations, perspective, color and all were as distinct as when walking in the fields or the streets. But this is not the characteristic which I wish to describe or illustrate. I have probably only narrated what is a common experience with others who have awakened in a dream and watched it, though it may, nevertheless, be interesting to note the fact

¹Essay on 'Intellect.'

that sensory action without its appropriate stimulus is as definite and complete as either in reality or in hallucinations. The fact, however, to which I call special attention in it is that I cannot recall or did not have the peculiar feature of the second dream to be narrated, which resembled the first in its main characteristics; that is, the visual reality and projection of the apparent object.

I dreamed that I was in my old bed-room where I slept when I was a child. It was oblong in shape and I recognized it, my view of it appearing as it would if I were lying on the bed. I awakened in the midst of the dream and keeping my eyes shut (there being no reason to open them as no darkness appeared, though where I was actually sleeping it was quite dark), I noticed paper on the walls, a kind I had never seen in my recollection. Now there never had been any paper on the room represented in the bed-room of my childhood, and observing it in the dream image I felt some surprise, because I knew that my bed-room had never had paper of any kind. This discrepancy at once convinced me that I must be wrong about the room, the moment I compared what I saw with what I remembered, a comparison which did not suggest itself during sleep. The discrepancy had no effect. But, strangest of all, the moment that I saw the discrepancy and saw that I was not in the room as I had known it, I became confused as to where I was. I noted the resemblance in shape to my old bed-room, and tried to recognize where I was and though wide awake I could not think of myself as in my apartment in New York. I had not the slightest conception where I was. I could only see the walls and wall paper of my old bed-room. After the lapse of about a minute the paper and walls vanished quite suddenly, though a general mass of *Eigenlicht* remained, and I at once recognized that I was in bed in my apartment. I then opened my eyes. It is remarkable that the tactual sensations did not avail to localize me, but they did not. I felt myself lying down, but I could not obtain the least conception of where I was until the vision of the wall paper and walls disappeared, when I could *recall to the visual imagination and memory the shape of the room and position in it* in which I was actually sleeping. Had it not been for the discrepancy between what I saw and my memory of my old room at home, I might have still imagined that I was there. But I knew from the wall paper that this could not be, and I was puzzled to know where I was until the visual image began to break up and vanish, when I at once pictured to my mind where I was in reality.

Now, the question is, was my localization conditioned upon a

memory image in the visual center which could not be found until the real image vanished? Of course the identification, when it did come, represented my past experience with my bed-room in the apartment, and the assumption that I was where I had gone to sleep the evening before, but this had no effect until the visual image of my old room at home vanished. Nor did the tactual sensations to which I consciously deferred help me in the slightest degree to determine where I was. It all seemed to hinge on the representation in the visual memory of the room in the apartment after the real image of the old room at home had disappeared. Unfortunately I am not able to corroborate the supposition involved in the above question by any recollection of actually localizing myself in bed in the first dream which I have narrated. I only recall the fact that I was awake looking apparently at a beautiful landscape of mountain scenery, and that I was much interested in the nature of the phenomenon. But I am not certain that I knew I was lying in bed. This may have been after the image began to disappear. I do remember that I was lying on my stomach, but I do not recall that I was conscious of this fact before the picture vanished. Hence I can get in it no confirmation of the possibility that the localization depended upon a visual representation of my room as it was in the memory continuum of experience. Moreover, objection might be made to such a supposition from the fact that the possibility of memory representation conditioned the consciousness of the discrepancy between what I saw and what I recalled of my old room at home. Hence it seems all the more puzzling to note the fact that tactual sensations did not tell me where I was and that the localization did not occur until the visual memory became active.

But I had a waking experience which at least seems to confirm the supposition, though it may not be conclusive. I was riding in the cars of the New York Elevated Railway and had reached the Thirty-third street station. Just as the train left it I noticed across on the south side of Broadway the sign of a store for the *Microbe Killer*. I said to myself, "Well, this store has moved; it used to be around the corner of the next street north" (Thirty-fourth street). I fully expected to see it where it had been as the train moved. I looked up and saw a church (Dr. Taylor's) on the north corner of Thirty-fourth and Broadway, and I said to myself, "No, this cannot be; there was no church near where I had seen the *Microbe Killer* store." But I was not positively convinced of the error until I could see up the street as we crossed it. I felt puzzled for a few moments to know where I had seen the store. All at once there emerged in my memory a visual rep-

resentation of Broad and Arch streets, in Philadelphia, where I had seen a store at which the *Microbe Killer* was sold, the store being on that side of the street where it would have been in New York on Thirty-fourth street, if I had been correct in my first impression. Now the interest of the case lies, not merely in its being an ordinary case of redintegration (was there any association between the words Broad street and Broadway?), but in the fact that the space relations in the false and the true recollections were the same and that my illusion about the store was not discoverable until I formed a visual representation in memory of what I had seen in Philadelphia and could compare it with the knowledge or consciousness of any actual place in New York.

But I will not urge the case as proving anything. I narrate it here with the dreams only to encourage observations of others in the same direction. I do not know that such a phenomenon as is narrated in my second dream and the waking state following it is at all common. I should like to know whether others have had a like experience. It is of special interest as suggesting how little tactual sensations have to do with space perception and localization in it except as tactual experience is conceived in terms of visual space. Not that I mean to imply that we cannot obtain any notion of space whatever by tactual and muscular sensations, but that in this case at least they seemed to have no power whatever to determine it. I certainly find in my own case no reason to accept the Berkeleian doctrine of space and our localization in it, and this wholly apart from the dream experience just narrated. In this case, however, the localization was definitely related to the visual representation of my place of living. The only question that remains is to know whether such a phenomenon occurs often enough in the experience of others to give it anything more than individual significance and interest.

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THREE CASES OF SYNÆSTHESIA.

The subjects of this report are three sisters, D, C and K, aged respectively 9, 10 and 12. Their father and mother are good visualizers, the father having definite number forms. There are also two younger brothers one of whom, aged about 5, visualises his alphabet so vividly as to be able to read it off backwards with unexpected rapidity. His alphabet form is traced to the perpendicular series from which he