

Case of unilateral hallucinations of hearing, chiefly musical : with remarks on the formation of psycho-cerebral images / by Alex. Robertson, M.D.

Contributors

Robertson, Alexander, M.D.
University of Glasgow. Library

Publication/Creation

[London] : [publisher not identified], [1902] (Adlard and son)

Persistent URL

<https://wellcomecollection.org/works/haepbppw>

Provider

University of Glasgow

License and attribution

This material has been provided by This material has been provided by The University of Glasgow Library. The original may be consulted at The University of Glasgow Library. where the originals may be consulted. Conditions of use: it is possible this item is protected by copyright and/or related rights. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s).



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

CASE OF UNILATERAL HALLUCINATIONS OF HEARING, CHIEFLY MUSICAL; WITH REMARKS ON THE FORMATION OF PSYCHOCEREBRAL IMAGES.

By ALEX. ROBERTSON, M.D., F.F.P.S.G.,
Consulting Physician, Glasgow District Asylum, Gartloch.

c

IN supplement to my paper on one-sided hallucinations in the *Journal of Mental Science* for April, 1901, the following case of a similar kind, but presenting special features, is, I think, of sufficient interest to be recorded. The patient is an inmate of the Glasgow Old Men and Women's Home, and is a man of some literary ability, as is shown by his still continuing to contribute articles from time to time to journals published in London. The Home, it need scarcely be said, is for people of sound mind, though many manifest indications of the ordinary mental decay incident to old age. The patient referred to is, however, acute and intelligent, and free from all suspicion of mental weakness or disorder. The account of his experiences, which he submits, may therefore be regarded as very reliable. It seems preferable to give it in his own language, only pruning it a little from unnecessary detail. The form in which it appears is due to his great deafness, on account of which the desired information could only be obtained from him as replies to written questions.

The appended report by Dr. Barr, author of a well-known treatise on diseases of the ear, on the condition of the patient's hearing, along with his remarks on that and other like cases in people of sound mind, will be regarded as of considerable importance and value.

A. L—, æt. 76, merchant.

Questions and Answers.—1. Which ear are imaginary musical or other sounds heard in? *Ans.* The right ear only.

2. Are they always heard in that ear? *Ans.* Yes; the left ear seems impervious to all sounds.

3. Do the sounds ever appear like voices? and, if so, what do the voices say? Are they men's or women's voices, or both? *Ans.* No; they do not resemble the human voice, but instrumental sounds only. (Answer to question 5 modifies this answer. It there appears that he has heard "voices," but only as singing.)

4. Describe the musical sounds in some detail, such as the character of the instruments, and particularly if they are high or low notes. Whether are the high or low notes heard best? *Ans.* They are those of orchestral brass instruments, and the middle notes inclining to the lower seem predominant.

5. During how many years have these sounds been heard? Have they been constant during these years, or sometimes absent? What time of day generally? *Ans.* It is about ten or twelve years since these sounds began to manifest themselves. Then they became very troublesome and intermittent, and this led to the fear that the brain was being affected. Often during the day, while at business, I heard the sounds as of an orchestra, which suggested the presence of a German band, and I would look out to see if it were playing in the street. Even at night, 10 or 11 o'clock, the same effects would be produced, and I have opened the windows for the same reason, to find it was only illusory. On one occasion, at Queen's Terrace, I seemed to hear strains of music in the next house, and could discriminate the various instruments, the music that was being played, and a very fine baritone voice singing along with the instruments. I called the attention of Mrs. S— to it, and asked her to listen, which she did, but told me that she could hear nothing. I persisted, however, in saying that I could follow the music with perfect confidence, and it was only by perceiving that the National Anthem was being too often repeated that I came to the conclusion I must be in the wrong. It happened frequently that after getting into bed I heard a rushing sound, as if the room was crowded with bats violently flapping their wings, at which I would sit up till the sounds gradually disappeared. It was about the same time that my sleep was much disturbed by unpleasant dreams and visited by frightful spectres, which would give me no rest. This distressing state has quite disappeared, but there still remains in the left ear a faint sound as of falling water, which was the first indication of my ear trouble; and in the right ear when I hum to myself, especially in bed, there is the sound of a harmonium, soft or loud, according to the pressure on the ear. In attending church now I use an ear-trumpet, but derive little benefit from it. I hear two voices in church, the first being the natural voice, the other of a different kind, which overlaps the natural voice and destroys all articulation, which is quite lost.

6. Are you always conscious that the sounds are imaginary, or do you think them real sometimes? *Ans.* I am now convinced that they are wholly imaginary, as I cannot hear the sounds really produced, unless through the ear-horn.

Note by Dr. Barr.

First saw patient eight years ago when very deaf in both ears, with a constant rushing sound in left ear. At that time there was a history of defect in the left ear for ten years, and in the right for two years. Now the hearing is extremely defective. A watch heard ordinarily at forty inches from the ear is not perceived in pressure on either ear. On left side loud speech close into the concha is not understood. On right side such speech is only heard and understood very near to the ear. A Galton's whistle is not heard at any degree of pitch. There is nothing in the external or middle ears to account for such an extreme degree of defective hearing. The Eustachian tubes, as tested by the catheter, are quite permeable. The examination therefore points to an affection of the *nerve structures* as the cause of the defect. Whether this be central or peripheral (in the labyrinth) cannot, I think, be determined with any degree of certainty. No doubt the idea of a central lesion is suggested by the peculiar subjective sounds or hallucinations of hearing which he experienced for a considerable time. These took the form of complete tunes (described in his own statement).

In a note accompanying above report Dr. Barr remarks, "I had a lady under my care (now dead) who assured me that she heard *constantly* going on in her ear (or head) the tune usually heard with the singing of the metrical version of the 100th psalm. This had gone on for years, and followed a fall on the pavement, when her head struck the kerb-stone violently. There was no explanation in the ear so far as it was accessible. I now know a gentleman (I think also known to yourself) who hears the sound of an electric bell at definite and perfectly regular intervals of time in his ear. I had also a case a few months ago, of musical compositions being heard in the ear. I cannot at present find my note of this case."

"Apparently Mr. L— is a man of distinct musical gifts, and has also evidently some literary power."

Remarks by Dr. Robertson.—In accordance with accepted doctrine regarding the functions of the cerebrum, it is probable that a complex combination of sounds such as constitute a

complete tune or other piece of music, assumes a definite shape and enters into consciousness in the related perceptive centre in the temporo-sphenoidal lobe. There may probably be a certain arrangement of impressions in the labyrinth and auditory nerve, but it is not likely, considering the structure of these parts, that this will go beyond such an assortment as will prepare them for fitly taking their place in the central blend that constitutes the fully developed form.

The reappearance in the mind, from time to time, of the same combination of impressions as in Dr. Barr's case of the recurring psalm-tune, or the words, "come this way, come this way," in one of my own cases,⁽¹⁾ raises a question of still greater difficulty than the one just referred to, viz. how on the physical side is the revival produced? The same problem is involved in the memorial recurrence of all sensory images, and, indeed, in the exercise of thought. Some light may ultimately be thrown on the subject by the study of simple and one-sided phenomena, such as are recorded in this and the previous paper, or we may at all events be able to formulate a working hypothesis as a platform for further investigation. It would, of course, be out of place in the present connection to attempt a discussion of questions of such magnitude. I may, however, in accordance with the most generally accepted views of the neuron and its associations, briefly indicate the direction in which, as appears to me, progress is most likely to be made.

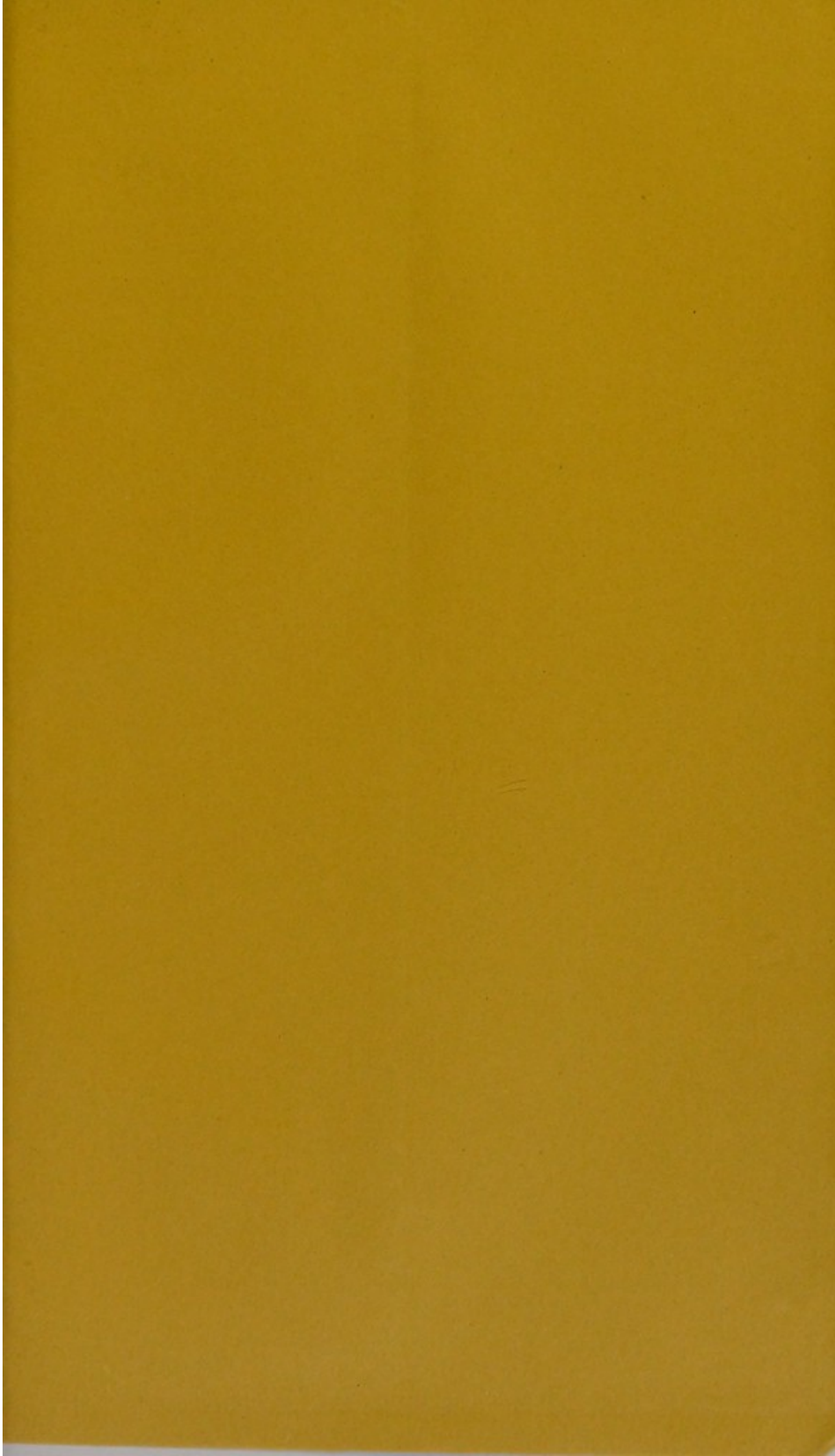
In the higher animals the gemmæ of the protoplasmic processes and collaterals of the axis-cylinders are discontinuous, though in close proximity to each other, and are thus open to receive impressions coming by different routes. It is further to be noted that in immediate relation to the cell-body of the neuron there is a pericellular reticulum, which is in intimate association with the similar reticula of at least neighbouring nerve-cells. In these structural conditions there seems to be a mechanism fitted to combine and unify the elementary parts of images into one harmonious whole. Again, it is to be borne in mind that the molecules of matter are believed to be in constant motion—motion that is under the plane of observation with our present powers.

Turning now to the formation and renewal of cerebral images, we may conceive that impressions coming from external objects are transmitted as waves of subconscious

vibration to the reception-centre, where a group of neurons, through the reticula surrounding their cell-bodies, enter into corresponding or related vibration, as a result of which the complete form is presented to the mind. Further, just as the combined action of nerve and muscle in any movement facilitates the repetition of that movement, so the impress produced on living nervous matter in the production of the image will dispose to the recurrence of the same combination of neurons and the same character of vibration in them with the revival of the image in consciousness.

Thus, then, we may entertain the thought that memorial representations of all kinds, on their physical side, are vibratory in their nature, and that the vibrations occur in definite associated groups of neurons. We may further suppose that with the changes in the countless images that pass before the mind, there is a corresponding kaleidoscopic change in the mutual relations of the neurons concerned in their production.

(1) *Journal of Mental Science*, p. 281, April, 1901.



46.7
26

1