This case was interesting from the latency of the insanity for four years, during all which time it was known only to his wife, who kept the secret at a terrible risk.

Whether the sudden and excessive development of the sexual desire was the cause and precursor of the general paralysis, or whether it was part of the earlier *symptoms* of that disease, I shall not detain you now to inquire.

Auditory Hallucinations. By George Fielding Blandford, M.D.

(Read at a Quarterly Meeting of the Medico-Psychological Association in London, December 3rd, 1873.)

I trust to be excused if in these days of pathological and anatomical research, I ask you to examine with me to-night a group of symptoms. I need hardly say that the study of symptoms must ever be of importance in the treatment of disease, and especially of that disease with which we are all concerned, and although to the general medical public the subject of hallucinations of hearing may have no special interest, yet the members of this association know that they characterize a very peculiar and well-defined class of patients, and that, common as they are, their nature and pathology are uncertain and mysterious. I have, therefore, chosen them, as the subject of a paper, chiefly for the purpose of promoting discussion concerning them, and eliciting the opinions of those here present.

The subject of hallucinations is generally treated by authors as a whole, and they are divided into those of sight, hearing, smell, taste, and touch. The best known treatises are those of MM. Baillarger, Brierre de Boismont, and Michea, all of which arose, if I am not mistaken, from the competition for a prize on the subject, offered by the French Academy of Medicine. I do not, however, propose to consider now the whole subject of hallucinations, but those of hearing only, thinking that they form a class special and apart from others, a class of the highest importance and interest to all practising in this specialty, whether we examine it from a pathological, therapeutical, or forensic point of view.

Although I do not propose to consider the hallucinations of the other senses, yet it is impossible to avoid a comparison

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between those of hearing and sight. These two varieties are by far the most common of all that are met with, whether in the sane or insane, yet there is a great difference between them. Hallucinations of sight belong, according to my experience, to the acute, rather than to the chronic stages of insanity. We find them in patients suffering from acute delirium and acute mania, just as we meet with them in delirium tremens and other acute febrile disorders, but from the former the patient, unless he chance to die, does for the most part recover, and the visions and spectres vanish, and even if he does not regain his reason, but remains a chronic lunatic, the hallucinations, which accompanied the acute symptoms, subside, and are no more seen. This is the case in the majority of instances, not always, for I have a lady under my care who is much tormented, after many years of insanity, by lights and flashings directed upon her in the night. On the other hand, hallucinations of hearing are not so common in very acute insanity, such as acute delirium and delirium tremens; and in the fevers and delirium of ordinary disease they are found far less frequently than those of sight. Where we notice them in the insane they are, for the most part, chronic, and the acute stage, whatever it may have been, has passed away. And yet, judging by the few cases I have seen, in which I have been able to watch the progress of the disorder almost from the commencement, I am inclined to think that there is a transient acute or subacute stage at the commencement of every such insanity. I saw the other day a young gentleman, aged 24, for whose brother I signed a certificate of insanity some five years ago. His disorder was of not more than a week's duration, but he was overwhelmed with voices which compelled him to write to their dictation quires of rhapsodies, which he called poems. Here there were somewhat urgent symptoms, sleeplessness, flushing of face, heat of head, a quickened pulse, and hysterical and impulsive outbursts, with a strong tendency towards suicide. And almost the same symptoms were found in the case of a lady aged 29, together with sleeplessness and refusal of food. In the latter case the acute symptoms, if they deserve the name, soon subsided, but the "voices" remained. Hallucinations of sight are said, and apparently with much force, to accompany a condition of deep exhaustion, whether of mind or body. The acute diseases in which they are found are exhausting diseases, and the insane patients are asthenic rather than sthenic, and the same

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thing may be noticed in those of the sane, who, without acute brain disorder, do from time to time, when fatigued or weak, see spectral visions. But the patients I have just mentioned as tormented by "voices" were more than commonly stout and robust, and their insanity certainly did not merit the name of asthenic. And I have not found that the chronic patients who suffer in this way are among the worst nourished or most miserable-looking of asylum inmates, far less so, indeed, than the melancholic class who do not, as a rule, present these phenomena. We see it stated, and stated truly, that hallucinations occur in the sane, and Griesinger says that nothing would be more erroneous than to consider a man to be mentally diseased because he had hallucinations. But on examination of the examples of hallucinations occurring in the sane, we find that by far the greater number of them are hallucinations of sight; those of hearing are rare, at least I have been able to discover but few well authenticated cases, and in these, though possibly insanity did not exist in the common acceptation of the term, there was more brain disorder than in the patients troubled with spectral illusions whose condition, if removed from that of ordinary health, was one of exhaustion rather than disease. This question may become one of considerable importance if it should be stated in a court of law that a person may suffer from hallucinations of hearing, and yet be sane. In answer to the abstract principle, it would be urged that hallucinations of this kind were uncommon in the sane, and the facts of the particular case would demand a very close investigation. I am not aware that there is on record any case of a persistent hallucination of hearing a voice occurring in an individual who was beyond question sane. There is the celebrated instance of Johnson who heard his mother's voice call "Sam," but it is not related that this happened frequently, and Johnson's mental condition at times verged upon insanity, to say the least of it.

Can we frame any hypothesis as to the pathology of these phenomena? In what consist the well-known incurability and persistence of these hallucinations? Spectral hallucinations come and go almost momentarily. Delusions of all kinds and all degrees of fixity may vanish, even after considerable periods of time, and yet when these "voices" are once established in a patient's brain, they seem to defy our efforts to oust them. They may fade into distance, may become infrequent, nay, for a certain period may seem to have

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departed, but they come back again, and the only thing certain about them seems to be that they will again be found at some time or other prompting a patient who seems otherwise well to swift and sudden violence, or tormenting him till he cries to us to have pity on him and bring him relief.

I think we may assume in the first place that hallucinations do not depend on any disorder of the external organs of sense. Nobody supposes that any disease of the eye brings about the spectral hallucinations of the sane or insane. Neither can we believe that the ear is concerned with the hallucinations of hearing. Such phenomena as singing in the ears, which may be due to aural disturbance, are quite distinct from the voices with which we are concerned. But although the external apparatus of sight and hearing are not involved, we cannot avoid the conviction that there is a region of the brain which is disordered, a region which is habitually employed in receiving from the external organs the images and sounds they convey, and transmitting them to the higher brain-centres. I will not presume to conjecture where this region is situated; for the topography of the brain has yet to be definitely mapped out, though we may hope that the zealous labours of the present day will ere long add greatly to our precise knowledge of it. We may, I think, be sure that some such region or regions exist, that there is a mind's ear as well as the mind's eye. It is not that by an effort of attention alone we can call up through the idea portion of the brain a sound or a voice. Often sounds—as for example tunes—rise up unbidden, and a contest ensues between them and the thoughts which attention is doing its best to keep before us. A person haunted by a tune may be almost compared to one who hears a voice, and the persecution may for a time be not inconsiderable. By-and-bye the tune ceases, spontaneously, so far as we know, and then it may at any moment recommence, and this is as analogous as anything I know to the unbidden voices which torment the insane, but the one phenomenon is physiological, the other pathological. We clearly see here that the external organs of hearing are not concerned, for all this may go on without the slightest sound, and may continue in spite of a strong effort of will to restrain or banish it. If we turn to anatomical books we find the auditory centres located in the medulla oblongata. Without going so far as to say that here is the seat of these hallucinations, there appear to be

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reasons why they may be referred to such a region rather than to the higher centres of the brain convolutions.

The persistence of auditory hallucinations makes it probable that this internal ear of the brain, if I may use such an expression, is capable of undergoing an organic change which leaves it in a diseased condition, and liable to an irritation more or less persistent, so causing the phenomena with which we are so well acquainted. That the voices take their fashion and tone from the prevailing temper and emotional condition of the patient is but too certain. An hallucinated man, whose state is melancholic, hears voices that say things quite different from those which a maniacal or monomaniacal individual reproduces. Fortunately for us not everyone of these patients is impelled to homicide or suicide. We are all acquainted with eccentric men and women, whose voices talk a great deal of most arrant nonsense, but their condition being tolerably tranquil and free from depressing emotions, they pass through life, it may be, like other chronic and harmless lunatics. Yet it is not to be forgotten that, if through ill health, or bad news, or any lowering cause, their condition becomes altered, the harmless voices and the harmless patients may, with little warning, become dangerous to themselves or others. As to the nature of such an organic change nothing can at present be said, but as the microscopical investigation of the brain advances, some light may possibly be thrown upon it, and it is greatly to be desired that those who in our large asylums have the opportunity of examining after death numerous brains, will try and discover whether there be any constant change in those who, during life, have presented the symptoms we are now considering.

Who are the patients in whom we chiefly find these voices, these hallucinations of hearing? On the other hand, what class of patients are exempt from them? According to my own experience, I have not usually found them in those whose insanity has commenced at an advanced period of life. Patients of 50 or 60 years of age are not, I think, generally afflicted with voices, unless they have retained them from an earlier period. Climacteric insanity, as it is called, is usually of the melancholic type, and not characterised by hallucinations, and this may be one reason why such patients do, in a large proportion, recover. So far as I have been able to observe, patients, at the time these voices first arise, are young rather than old; nay, in many, this form commences

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under the age of 30. A large number of the young men and women who are admitted into asylums, and whose age and appearance would lead us to suppose that their insanity is curable, remain permanent patients because they are thus affected. We are called, it may be, to pronounce an opinion on a recent case. The symptoms may be somewhat acute, and have begun suddenly; the general health may be fair, and youth is on the side of the patient. There may be everything to lead us to give a favourable prognosis, yet time goes on, and though there may be amendment, there is no recovery, and at one time or other, perhaps not till after a considerable period, we discover that he or she hears voices, and our prognosis changes, and instead of being favourable becomes most unfavourable.

In that other variety of insanity in which our prognosis is also unfavourable, invariably unfavourable—I mean progressive, or general paralysis of the insane—we do not, according to my experience, meet with hallucinations of hearing. In the various cases of this disorder lately met with, I do not recollect any who have been tormented in this way. Fatal as is the lesion which destroys such patients, its seat would seem not to be that of these hallucinations, and inasmuch as general paralytics present nearly every delusion, both grandiose and melancholic, which are found in the ordinary insane, we may, I think, infer that there is a special seat for voices, and that it probably is not in the convolutions of the brain. M. Brierre de Boismont, in his work on "Hallucinations," states that they were found in 37 cases out of 147 of general paralysis, but those he gives are all examples of hallucinations of sight and not of hearing.

If we take a list of the various forms of insanity, such as Dr. Skae's, with which we are all familiar, and examine it with the view of determining the varieties in which hallucinations of hearing are most frequently encountered, it will not, I think, appear that they are specially confined to certain classes, though there are some in which they are certainly rare. The data, however, on which I base my own conclusions, are necessarily limited. I trust that those with a larger experience will confirm or disprove my own impressions.

As I have not, as a rule, found hallucinations of hearing commencing in those whose insanity comes on at the climacteric period, so neither do they seem common in the insanity of pubescence. In children we should expect to find those of sight rather than of hearing, visions and spectral

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illusions, or violence, and abnormal motor manifestations without hallucination or delusion of any kind. Here, again, we have a variety in which the prognosis is favourable. But when the patients are past childhood, and have reached the state of manhood and womanhood, they seem especially prone to this complication. There is a variety which has been added to Dr. Skae's list, by Dr. Clouston, termed Hereditary Insanity of Adolescence. It is not described, so that I do not know the particular meaning attached to it, nor the precise age to which he gives the name "adolescence," but, assuming it to mean the age from 20 to 25 years, this variety would, according to my experience, embrace a great many cases of insanity, accompanied by hallucinations of hearing. Such patients have not broken down in their mental health through the strain of worry or work; neither have they fallen a prey to physical causes or bodily disease, but the insanity has made its appearance because of the strong inherited predisposition, and in these cases the hereditary taint, coupled as it is with the special hallucinations we are considering, renders the prognosis very unfavourable. Dr. Skae calls all insanity due to mental or moral causes *idiopathic*, and, inasmuch as much of this must be inherited—for it is in patients who are predisposed that moral causes operate most powerfully—it follows that among his idiopathically insane we shall find many suffering from hallucinations of hearing. Another variety, the victims of which are, for the most part, young people, is the insanity of masturbation. That many of the patients who hear voices masturbate, is certain, but whether their insanity rightly comes under the head of insanity from masturbation, is a question. In fact, it is difficult to say in a great number of cases whether the masturbation is the cause, a concomitant, or even the consequence of the insanity.

There are several varieties of insanity in the classification I have alluded to, which are based on some disorder of the sexual or reproductive organs. Thus we find satyriasis, nymphomania, hysterical, amenorrhœal, post-connubial, ovarian and puerperal insanity, and the insanity of pregnancy and lactation. I have tried to discover whether hallucinations of hearing are or are not to be looked for in patients suffering from these forms. The cases at my disposal are, I fear, too few to make my deductions at all conclusive, but I certainly have not met with them in the insanity of pregnancy, which is generally melancholia;

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neither do I think them common in puerperal insanity, at any rate, in the acute stage. They are met with in connection with uterine and ovarian irritation, and I have twice found them in young women married to old husbands, both of whom were childless. Insanity from drink—insanity of alcoholism—by which I do not mean dipsomania or delirium tremens, but a chronic condition brought about by long continued tippling, I have reason to think is not unfrequently accompanied by voices. Three cases under observation at the present time are examples of this, two females and a male, and here, as might be expected, the age was somewhat advanced. One of the ladies, if not both, has also hallucinations of sight. Then we come to a number of varieties in which I believe voices to be rare. These are hypochondriacal insanity, senile, phthisical, metastatic, traumatic, rheumatic, podagrous, and syphilitic. Of malarious and pellagrous insanity I can say nothing. Post-febrile insanity, the insanity which arises in the course or decline of acute diseases, does not usually present this symptom; though there may be hallucinations of sight. In choreic and anæmic insanity I should not expect them. In short insanity complicated with other diseases seems to be free from hallucinations of hearing, which are chiefly to be found in the idiopathic and hereditary disorder, which comes on from some mental cause, or even without any assignable cause whatever.

You are aware that a distinction is made between hallucinations and illusions; that an illusion is said to be a false interpretation of a real sound, while an hallucination is a false perception, a fancied sound or voice, when there is no sound at all in reality. Some patients have hallucinations, others illusions. I do not think that there is much pathological difference between the two. Probably the inward ear, in the case of illusions, is stimulated into action by the stimulus of the sound conveyed to it by the external ear, but the idea bears no reference to the external sound, and is often a "voice" just as much as the hallucination proper. One of the most dangerous patients I ever met with was a gentleman who professed to hear no voices unless some noise was going on, as footsteps, and then he heard voices telling him to murder some one. Probably the majority of such patients have both hallucinations and illusions combined. For the purposes of diagnosis, prognosis, or care and treatment, I think it is of little consequence whether their

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symptoms are hallucinations, strictly so called, or illusions. But there is a class of patients who have hallucinations of hearing, but do not hear voices, but only sounds, and this is a less formidable and altogether milder disorder, one which we may, with some confidence, hope will subside, and which if it does not, renders the sufferer less unhappy and less dangerous to himself and others. These patients, according to my experience, are not very uncommon, but their malady attracts less attention, owing to its less formidable character. The sufferer complains that noises are made in the next room or next house for the purpose of annoying him; that pipes are constructed in the wall, under the floor, or in the chimney, and he may take various steps with a view to ridding himself of these noises, such as complaining to the police, or the people next door; but this is a different state from that of the man who hears a voice commanding him to commit homicide or suicide, and straightway obeys it. I have known these noises subside and disappear for years, occasionally returning if for some reason or other the mental health of the individual had declined. I have also known patients become either accustomed to them or convinced to some extent of their falsity, and so able to live on in spite of them in their ordinary mode of life.

Other patients, though they suffered from hallucinations, were able to repress or disregard them sufficiently to carry on their daily work, or to live at home without being specially watched or guarded. Two cases I know, one that of a lady, and another of a gentleman, who thus manage to exist. Both have been away from home, but both have returned. They do not look upon the voices as hallucinations. They are fully persuaded of their reality, or were when last I saw them, but their conduct is not influenced to such a degree as to make it incompatible with life in ordinary society. How long this will last it is impossible to say, but as I shall hereafter have occasion to mention, such patients do not generally improve as time goes on.

In the years 1855 and 1856 the subject of hallucinations was discussed at great length before the Medico-Psychological Society of France, and the point chiefly in dispute was whether hallucinations are a pathological and morbid symptom, or only an exaggeration of a normal phenomenon, a modification of that which occurs in the ordinary operation of the psychical activity. On one side or the other were ranged all the chief psychologists of the day, but the debates

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are too lengthy to be reproduced here. The question, however, may arise if, in a court of law, a man's sanity or insanity is the subject of investigation, and hallucinations of hearing the symptom in dispute. In the discussion at Paris no distinction was drawn between hallucinations of hearing and those of sight or the other senses; yet, as I have already said, the former differ in many respects from the latter.

Two questions are here involved:—1st. Can hallucinations occur in the normal state? 2ndly. Are they compatible with sanity? To the first I should reply that they are at all times a morbid phenomenon depending on a disordered state of the brain, or brain circulation, whether they be hallucinations of sight or of any other sense. To the second I would say that they constitute insanity, if they are of that intensity that the mind is unable to correct them by means of its reasoning and reflective power, and to recognise them to be hallucinations.

The hallucinations of sight, which are so often mentioned as compatible with sanity, are spectral illusions which can be corrected by the other senses, and are for the most part merely momentary. And in almost all the well-authenticated examples there was some degree of weakness or illness, or recent recovery from illness at the time they were seen. Even our old friend Nicoläi, of Berlin, who does duty in every book in which this question is mooted, was a man so subject to attacks of congestion of the brain that he was obliged to have recourse to leeches two or three times a year.

Another case, related by Dr. Paterson, and translated by Dr. Craigie from Hufeland's Journal, was that of a gentleman who was haunted for two days by a phantom assembly, which only departed after the application of leeches. I believe you will find in all the cases where the details of the patient's health are fully recorded, that something was amiss at the time. A lady, with whom I am well acquainted, can almost guage her general health and strength by the presence or absence of such hallucinations of sight. Sir Henry Holland relates a case of hallucinations of hearing which occurred in a sane man, and were recognised by him at the time as hallucinations. He was an old man of 85, and he had fallen and struck his head against a sofa, and for a time lost the power of articulation and memory. After three or four days he heard two voices, seemingly close to his ear, in rapid dialogue. Though conscious of the fallacy, he was wholly unable to check or withdraw the perception of them. They vanished the next day, and never returned.

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Sir H. Holland also narrates a case, of great interest to us, of a gentleman, about fifty-two, without any obvious disease, who passed from the state in which he believed in and acted upon the reality of illusive sounds and conversations, to the condition in which, still having similar sensations, he recognised and treated them as delusions. He was asked at the later period how, when the same articulate sounds still seemed present, he had learned to regard them as delusions. He said it was partly by his never discovering any person in the place whence the voices had come, but chiefly by finding himself able, on trial, to suggest the words which were thus seemingly uttered by some one external to himself. "To these reasons," says Sir Henry, "might, doubtless, have been added some change in the actual state of the brain, however incomprehensible its nature and cause."

The latter case brings me to the consideration of the prognosis in these cases of hallucinations of hearing. You will not need me to tell you that it is most unfavourable. There can be few acquainted with asylums and asylum patients who cannot point to patients thus affected, who are both the most incurable and the most anxious of all the inmates. Many, I had almost said most, of those who make homicidal attacks on others do so at the instigation of their internal voices, and these attacks may, owing to such a source, be directed not only against the officers and attendants, but also against their unhappy fellow patients. We have to be ever on our guard, for a patient may be most friendly one minute, and in a second may change. I have a lady under my care at this time whose face changes suddenly from a smiling and pleasant expression to one of fury, and she will then rush at officers or attendants. And she is no less suicidal than homicidal, so that she can never be left alone, and can never be left at night with less than two attendants. There is an instructive case of this insanity reported by Dr. Lockhart Robertson in the "Journal of Mental Science" of April, 1861. The patient, a male, had murdered one man, and while at Haywards Heath nails, sharpened to a point, were found hidden under his mattress. He confessed to hearing voices. Concerning the latter Dr. Robertson says:—"Their influence in our prognosis is most unfavourable. Auditory hallucinations are so apt to lie dormant for a time, and again to reappear, that I should at any time be sceptical of the recovery of a confirmed case. This patient I consider to be quite incurable, and I should view the possibility of his being

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set at large with the utmost alarm." You will recollect that Dr. Robertson had previously reported the case of another homicidal patient in the Journal of July, 1860, as one of homicidal mania without disorder of the intellect. But there had been auditory hallucinations, though Dr. Robertson was not able to detect any while the patient was under his care. I have always thought that these two cases were both of them homicides from voices, and that Dr. Robertson's caution as regards the second would apply equally to the first, viz., that these hallucinations are apt to lie dormant and again re-appear. Moreover, it is not to be forgotten that patients find out in time what it is that keeps them in an asylum. They are examined and cross-examined upon their delusions by commissioners, doctors, and officers, till they are well aware that they will not get away so long as they acknowledge certain beliefs; so they deny them, and frequently it is difficult to ascertain whether they have lost them or not; sometimes a trial alone will decide the point. Thus they will deny that they hear voices. A lady under my care a few weeks ago was full of voices, and told me whose they were and all about them. Now that she is placed in an asylum, she entirely denies that she hears any, but as her conduct is equally insane, I have not the least doubt that she does, and I look upon her case, though recent, as perfectly incurable.

Of the persistence of these hallucinations nothing can give us a stronger proof than the case I have quoted from Sir H. Holland of the gentleman who continued to hear them even while he was aware of their falsity. If we contrast this with the ordinary delusions of insanity, we shall see how organised the hallucinations must have become. A delusion ceases to be a delusion when the patient recognises it to be a false idea. He may recollect having entertained it, but that isall. But in the case I have mentioned the hallucination remained, though there was sufficient sanity for it to be appreciated as false.

I have said already that the higher brain centres are not, according to my view, affected primarily by this disorder. There appears to be but little disturbance of the intellectual functions, at any rate at first, and some patients would, and do, pass for sane people, but for this one exception. Hence, the difficulty of dealing with them. They may tell us that the voices have ceased, and then there appears to be nothing amiss. They may persuade their relatives and

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friends that they are quite well, and the general medical public do not at present comprehend the grave character of these voices. My own belief, however, is, that the tendency of such patients is to get worse, that the power of repressing the voices and their suggestions becomes less and less, and that, in the majority of instances, the mental health is undermined by the constant worry and loss of rest and sleep brought about by them. The diagnosis of these hallucinations is often difficult, for patients will not always confess them. Much may be learned by observation of them when alone, for then they are most likely to listen for and answer the voices. And often we may detect a patient listening even while talking to us, and, by narrowly watching, may ascertain the existence of hallucinations, which may be quite unknown to the friends and relatives.

In my experience I have found these voices more common in chronic female patients than in male. Of 34 ladies now in an asylum, not less than 14, and possibly 16, hear them, while of 43 gentlemen I cannot be sure of their presence in more than nine. These numbers are, of course, very small for statistical purposes. I should be glad to hear the experience of those who have under their observation large numbers of the insane.

The Perception, &c., of Time as a feature in Mental Disease. By W. A. F. Browne, Psychological Consultant to the Crichton Institution. Late Commissioner in Lunacy for Scotland, &c.

(Read before the Quarterly Meeting of the Medico-Psychological Association at Edinburgh, November 27th, 1873.)

The power or process by means of which Time is mentally recognised and estimated independently of, or before, its external and artificial measurement, has not received a clear or comprehensive solution at the hands of those who have dealt with the subject. Certain metaphysicians connect the idea of duration with that of extension, and conceive that the child, or the savage, may have acquired a notion of intervals, or interrupted extension, from seeing and feeling through the muscular sense the alternate extension and flexion of his limbs; all comparison of such events with the successive changes in objective phenomena, as in days and nights, being the result of subsequent experience. Certain

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